# Monthly and Seasonal Mean Analyses

## June, July, August
## 1989

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# Monthly and Seasonal Mean Analyses

## June, July, August 1989

## Mean fields obtained from the archive of operational analyses

Met O 20 (Dynamical Climatology Branch)
Meteorological Office
London Road
Bracknell
Berkshire RG12 2SZ

September 1989

Note: Permission to quote from this document should be obtained from the Assistant Director of the above Meteorological Branch.

# Monthly and Seasonal Mean Analyses

## Introduction

The archive of operational analyses contains a continuous record of global analyses every 12 hours (00 and 12 GMT) from May 1983 onwards. They are copies of the update analyses produced in the operational numerical weather prediction system using the 15-level model (Bell and Dickinson 1987). In this booklet there are presented monthly and seasonal mean fields computed from the archived analyses for a single season. Since a season spans three calendar months, there are four sections. Sections 1, 2 and 3 contain charts of the monthly mean fields for each month, and section 4 contains charts of the seasonal mean fields. The seasonal means are the means of the fields in the first three sections, weighted according to the number of days in each month.

Each section contains a set of charts for the northern and southern hemispheres and a set for the tropics. In each hemisphere, polar stereographic projects have been used to prepare a chart of pressure at mean sea level and composite charts showing both height (contours) and wind (vectors and isotachs) at 850, 500, 250 and 100 mb. In the tropics the charts are presented on a latitude—longitude projection encircling the globe in three sections covering the longitudes 0°—120°E, 120°E—120°W and 120°W—0°. This projection has been used to produce a series of charts of wind vectors and isotachs at 850 and 250 mb. On all charts, contours are depicted as solid lines, wind vectors as arrows and isotachs as dashed lines.

When archiving was first undertaken, for May 1983, global fields were stored according to their coefficients in a series of spherical harmonics up to a triangular truncation of T40 (Swinbank 1984). Since this is roughly equivalent to a latitude–longitude grid with a resolution of 4.5° by 4.5°, the conversion from the model's standard grid of 1.5° by 1.875° to the spectral representation results in some smoothing of the fields. Subsequently, a new method for storing the archived fields was developed as a result of discussions within the Working Group on the Development of the Operational Suite (WGDOS). This method uses a compressed digital coding of the original model field, on its standard latitude–longitude grid, but with fewer significant figures (Lowther 1986). It was implemented on 18 December 1985 in a limited version. After the inclusion of more fields, and following monitoring to ensure that the two representations (i.e. truncated spectral and compressed grid-point) of the archived analyses were consistent, the spectral archive was terminated on 31 October 1986.

The contents of the archives may be examined by consulting the computer data set 'M20.NARCHIND', where the tape number, file number and data set name for each archived day may be found. The fields in the spectral archive are stored in the format required by the post-processing (p-p) package. Details of the format and of the subroutines to be used for accessing the data are described in the manual for the p-p package. Some examples are shown in Swinbank (1984). The fields in the daily grid-point archive are stored as printfiles (Lowther 1986). A list of the fields in each of the two versions of the daily archive is given in the relevant documentation.

The monthly and seasonal mean fields have been computed from the spectral archive up to the end of October 1986. Thereafter, they have been computed from the grid-point archive. The mean fields are held as computer data sets in Met O 20, in spectral or grid-point format, as appropriate, and are available for general use. Means for each month and season over three years of the spectral archive are also available. The mean fields that are held are as follows:

| Field | | Pressure level (mb) |
|---|---|---|
| Westerly wind component | (m/s) | |
| Southerly wind component | (m/s) | 1000*, 850, 700, 500, 400, 300, |
| Height | (dam) | 250, 200, 150, 100, 70, 50 |
| Temperature | (K) | |
| Relative humidity | (%) | 1000*, 850, 700, 500, 400, 300 |
| Pressure at mean sea level | (mb) | |

* Fields at 1000 mb are held in the spectral archive. In the grid-point archive this level has been omitted and fields at 950 mb are held instead.

**References**

| | | |
|---|---|---|
| Bell, R.S. and Dickinson, A. | 1987 | The Meteorological Office operational numerical weather prediction system, Meteorological Office Scientific Paper No. 41, Met.O.979, HMSO. |
| Lowther, D. | 1986 | WGDOS Printfile Archive, Operational NWP Scheme, Documentation Paper No. 9.1, Met O 2b, Meteorological Office, Bracknell. |
| Swinbank, R. | 1984 | A system to archive operational analyses for research purposes. Met O 20 Technical Note No. II/218. Meteorological Office, Bracknell. |

# JUNE
# 1989

OPERATIONAL ARCHIVE MEANS. JUNE 1989
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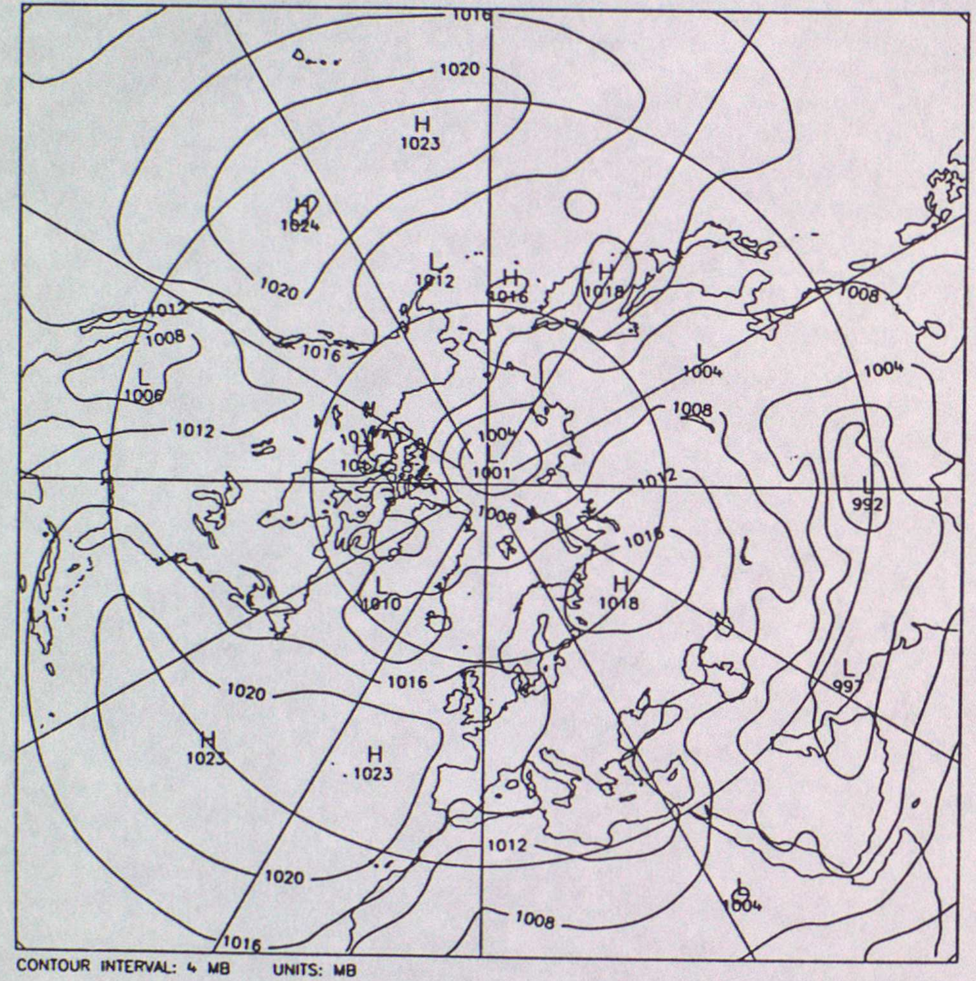
AVERAGE FROM 0Z ON 1/6/1989 DAY 152 TO 12Z ON 30/6/1989 DAY 181
SEA LEVEL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L 1004
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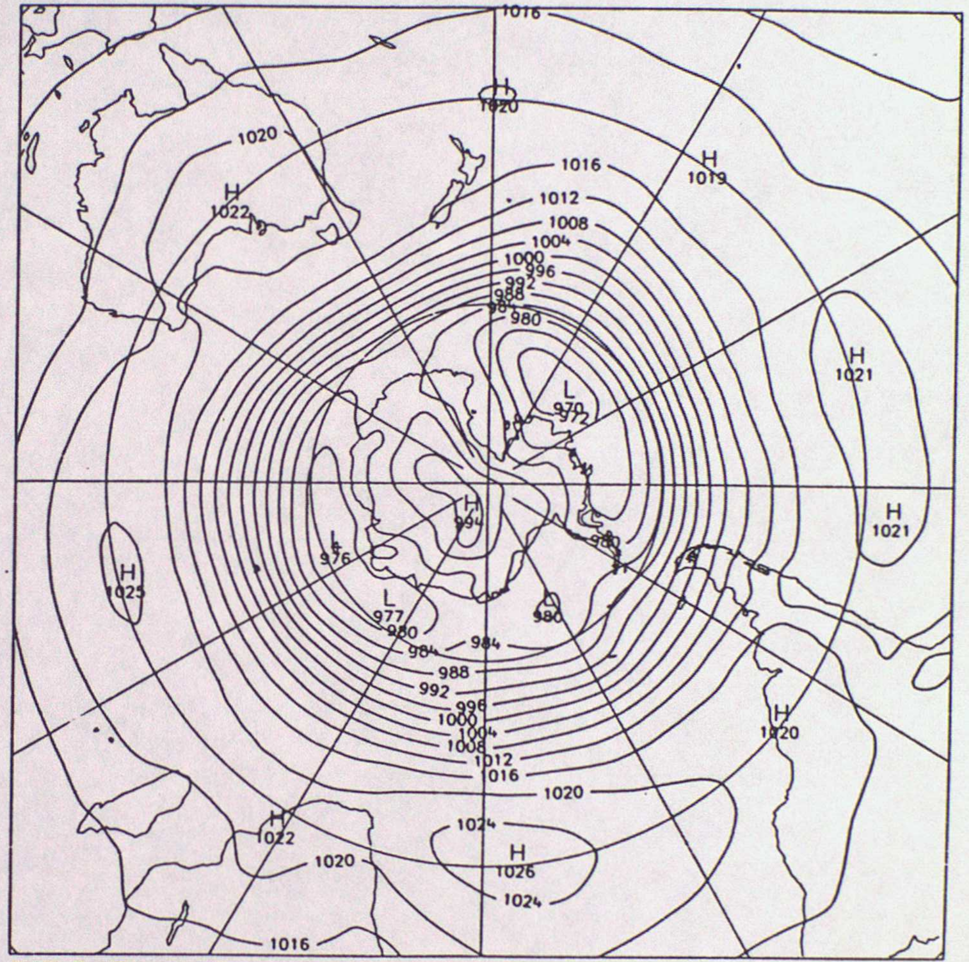
CONTOUR INTERVAL: 4 MB UNITS: MB

OPERATIONAL ARCHIVE MEANS. JUNE 1989
PMSL
AVERAGE FROM 0Z ON 1/6/1989 DAY 152 TO 12Z ON 30/6/1989 DAY 181
SEA LEVEL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L 977
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CONTOUR INTERVAL: 4 MB UNITS: MB

OPERATIONAL ARCHIVE MEANS.  JUNE  1989
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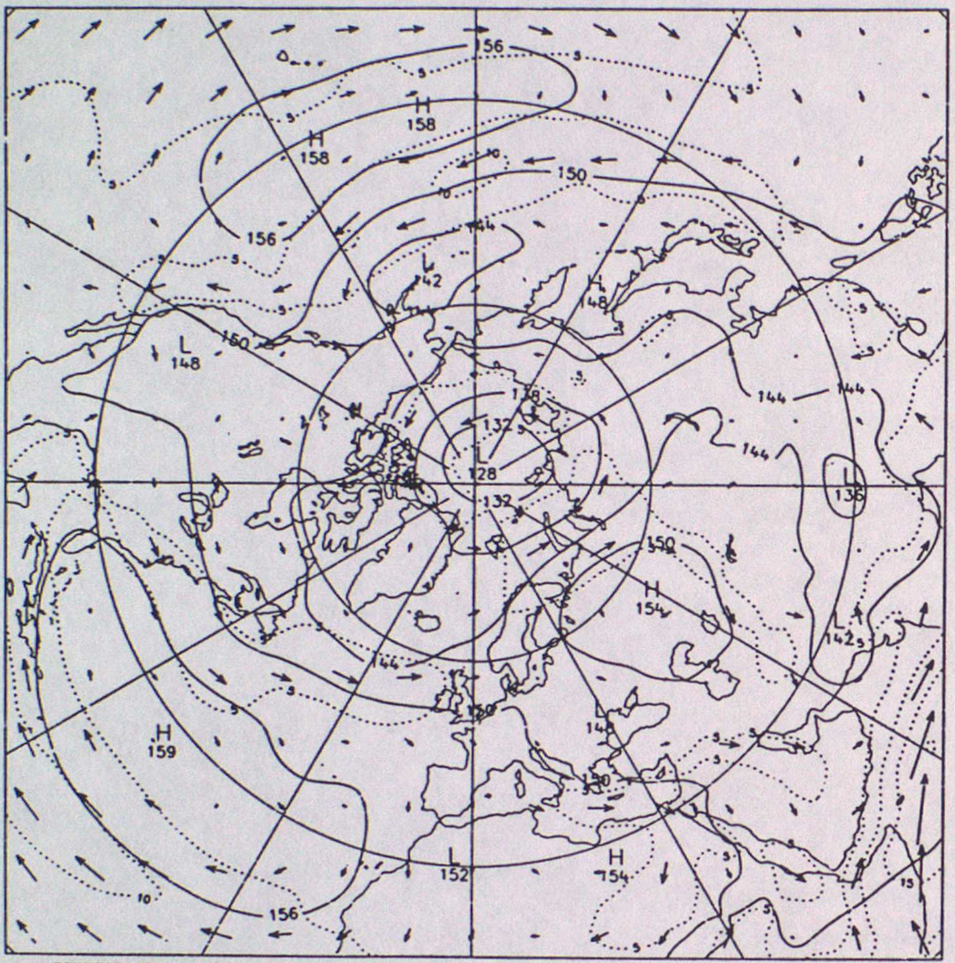

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144
150
H 159
L 152
H 154
156
5
10
15

→ REPRESENTS 10 M/S  CONTOUR INTERVAL: 60 M  UNITS: 10 M

OPERATIONAL ARCHIVE MEANS.  JUNE  1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
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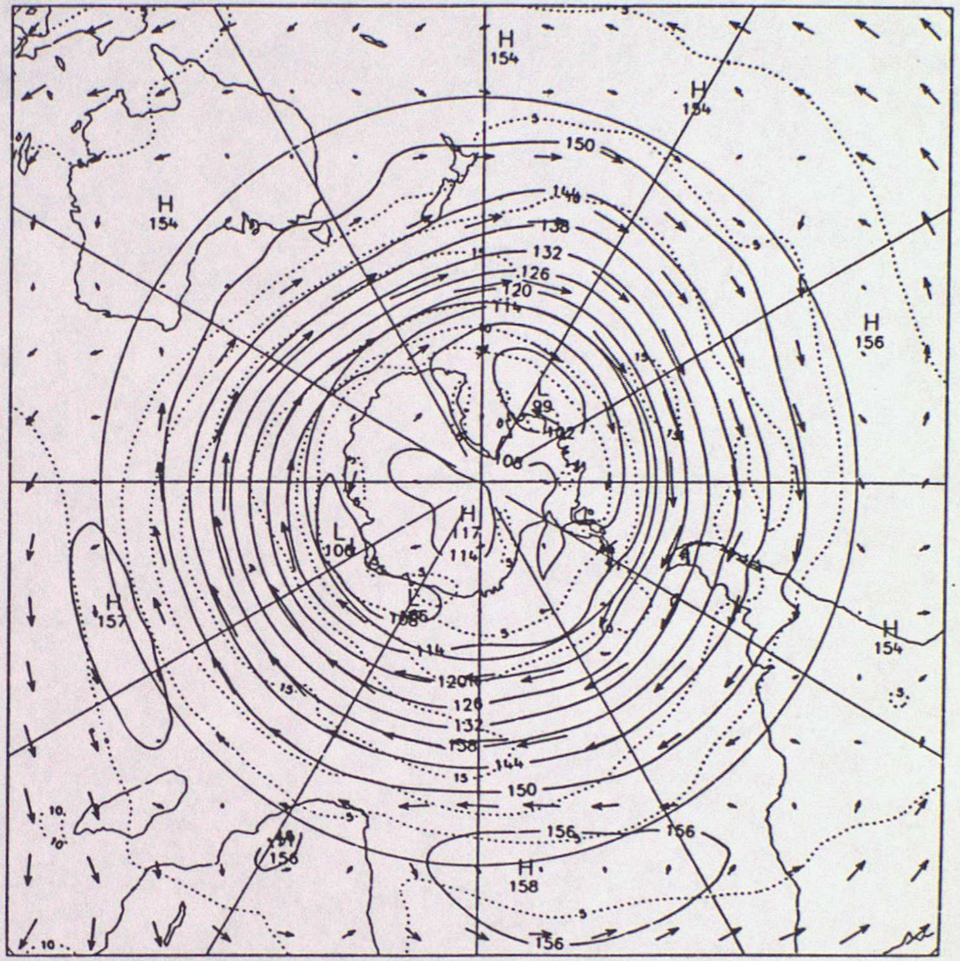

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5
10
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→ REPRESENTS 10 M/S  CONTOUR INTERVAL: 60 M  UNITS: 10 M

OPERATIONAL ARCHIVE MEANS.  JUNE  1989
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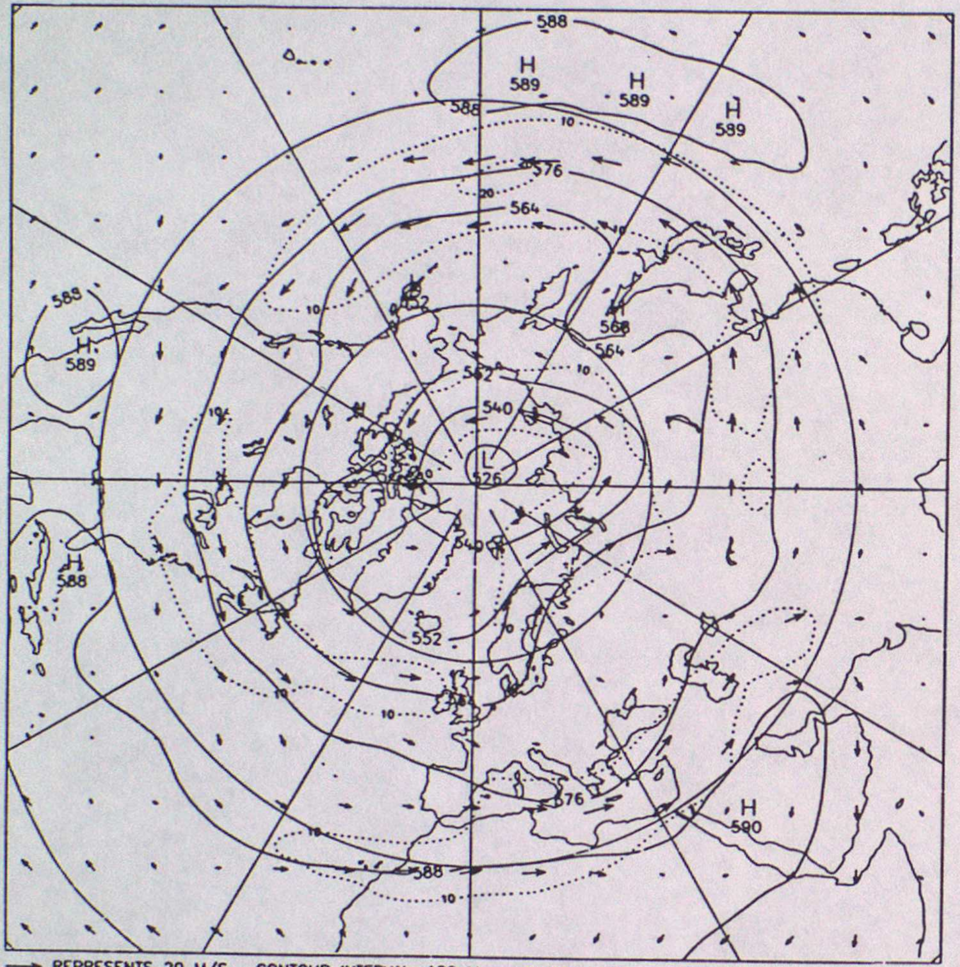
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OPERATIONAL ARCHIVE MEANS.  JUNE  1989
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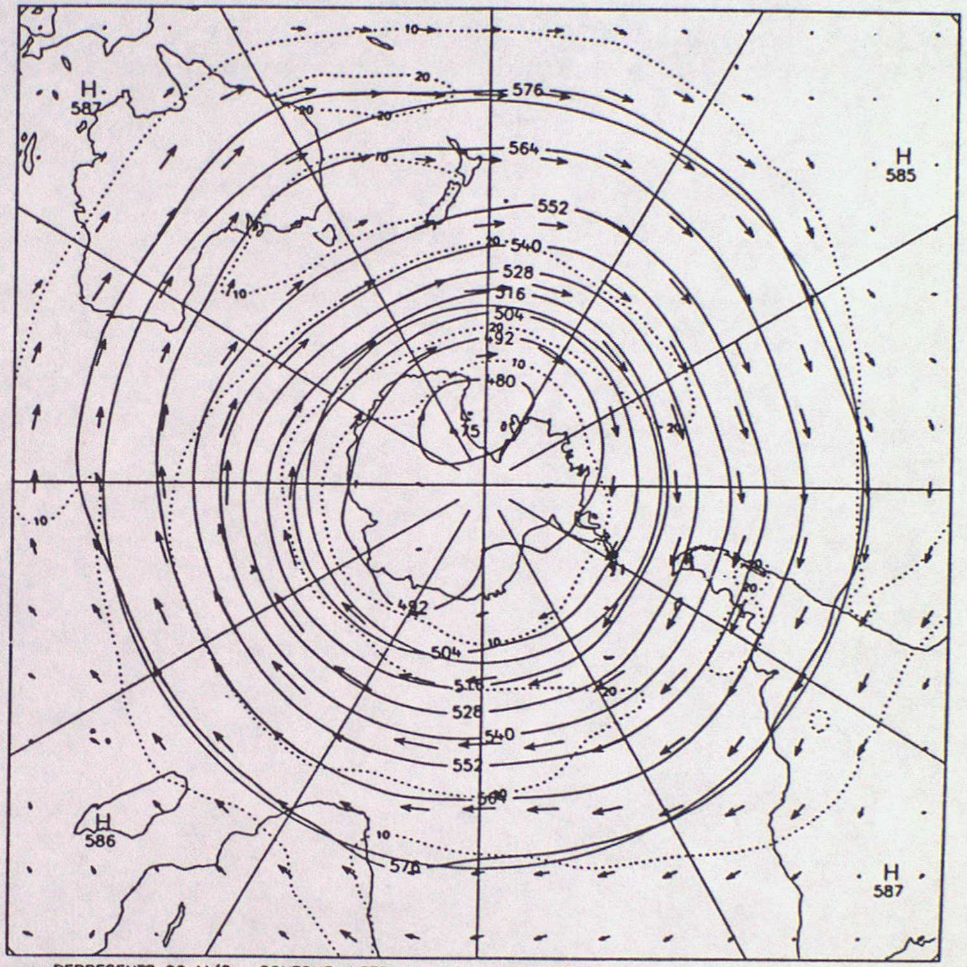
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564
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10
H 586
H 587
20
10

→ REPRESENTS 20 M/S  CONTOUR INTERVAL: 120 M  UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. JUNE 1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/6/1989 DAY 152 TO 12Z ON 30/6/1989 DAY 181
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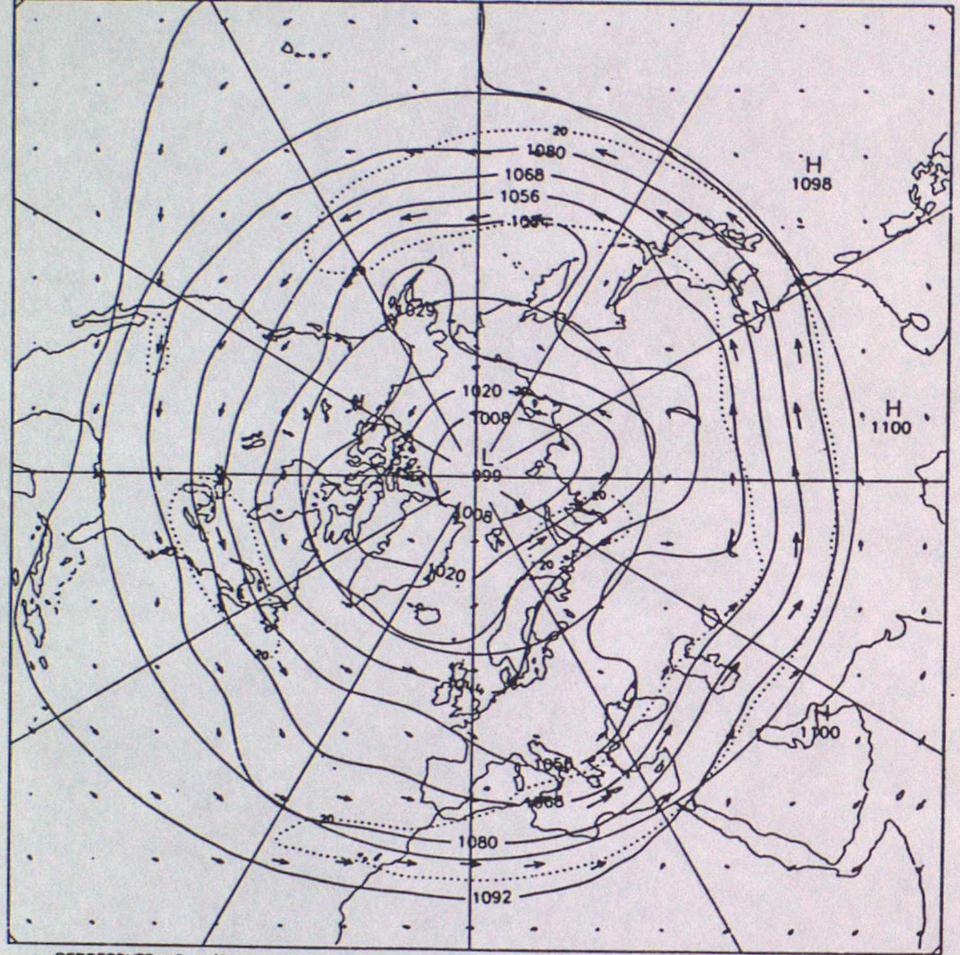
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→ REPRESENTS 40 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. JUNE 1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/6/1989 DAY 152 TO 12Z ON 30/6/1989 DAY 181
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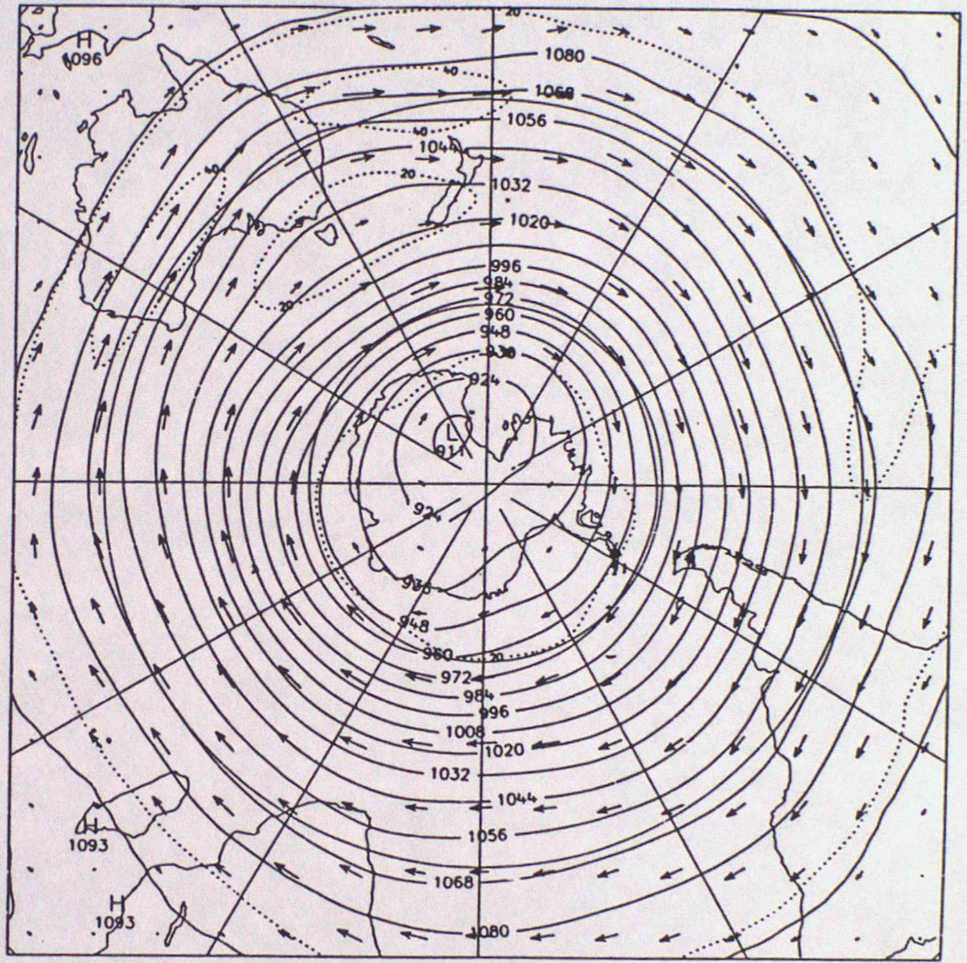
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1093
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40

→ REPRESENTS 40 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. JUNE 1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/6/1989 DAY 152 TO 12Z ON 30/6/1989 DAY 181
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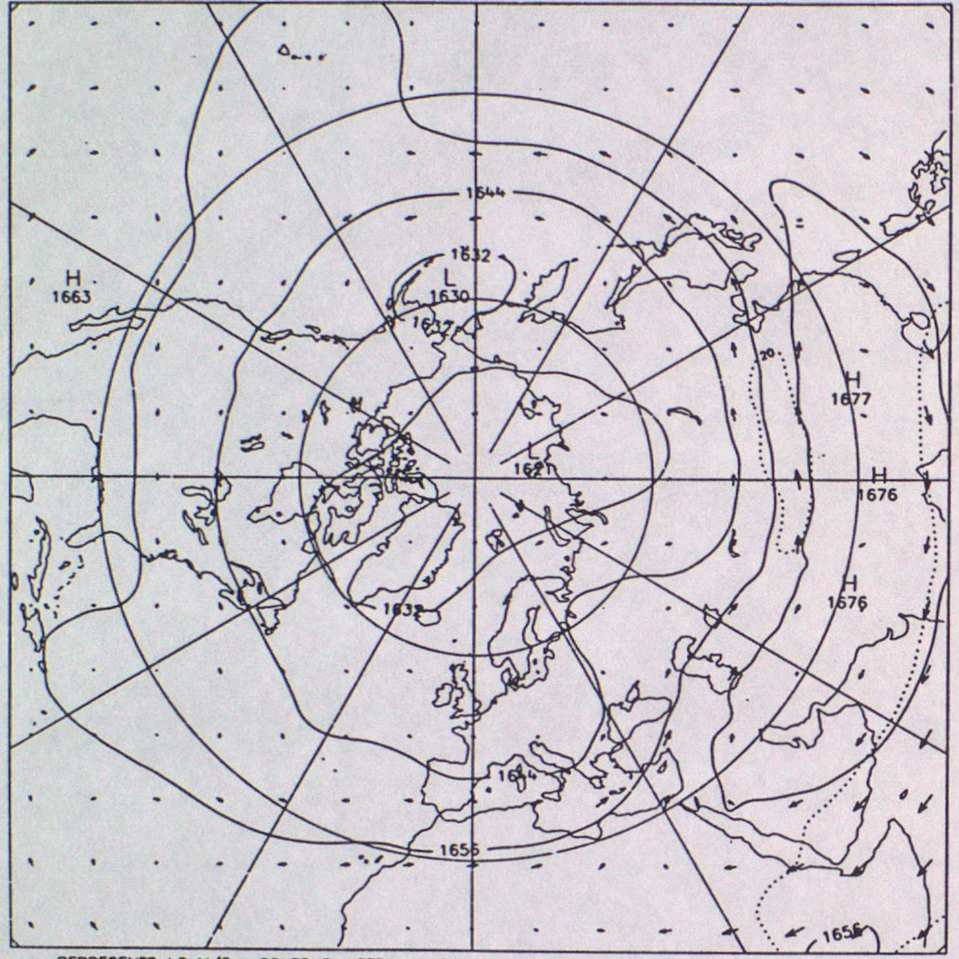
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→ REPRESENTS 40 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. JUNE 1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVFRAGE FROM 0Z ON 1/6/1989 DAY 152 TO 12Z ON 30/6/1989 DAY 181
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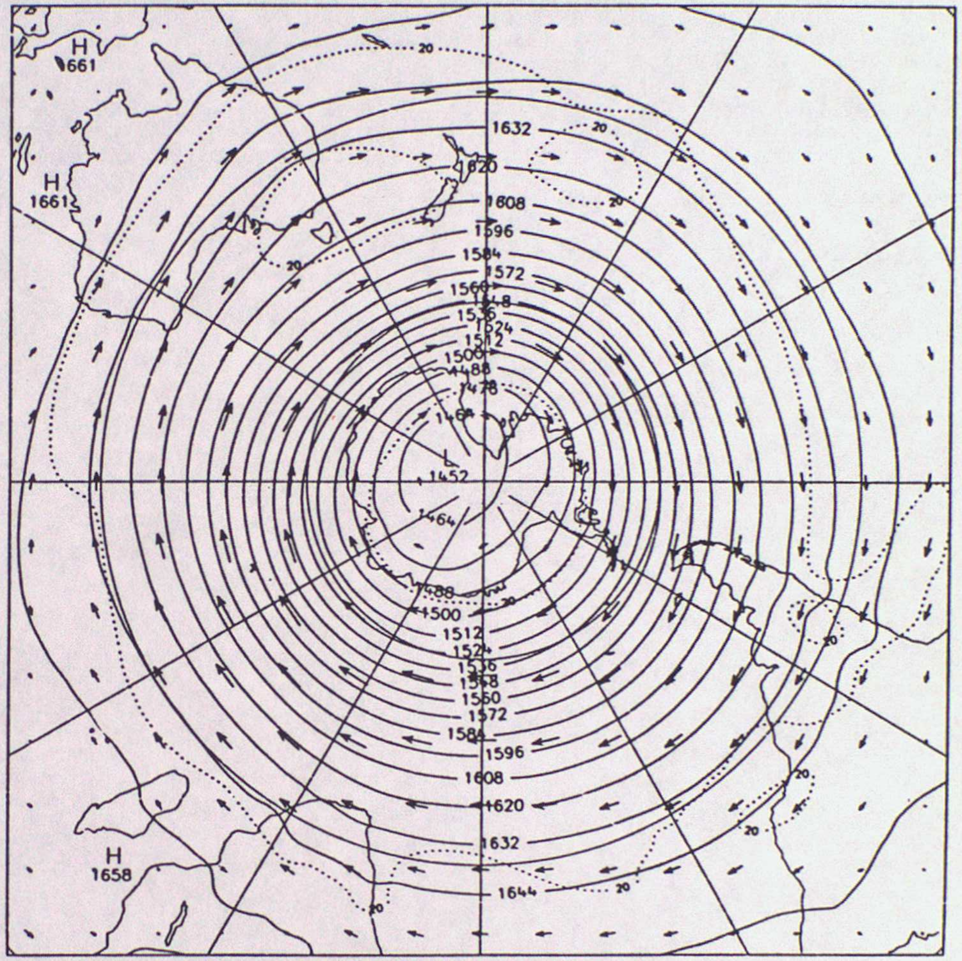
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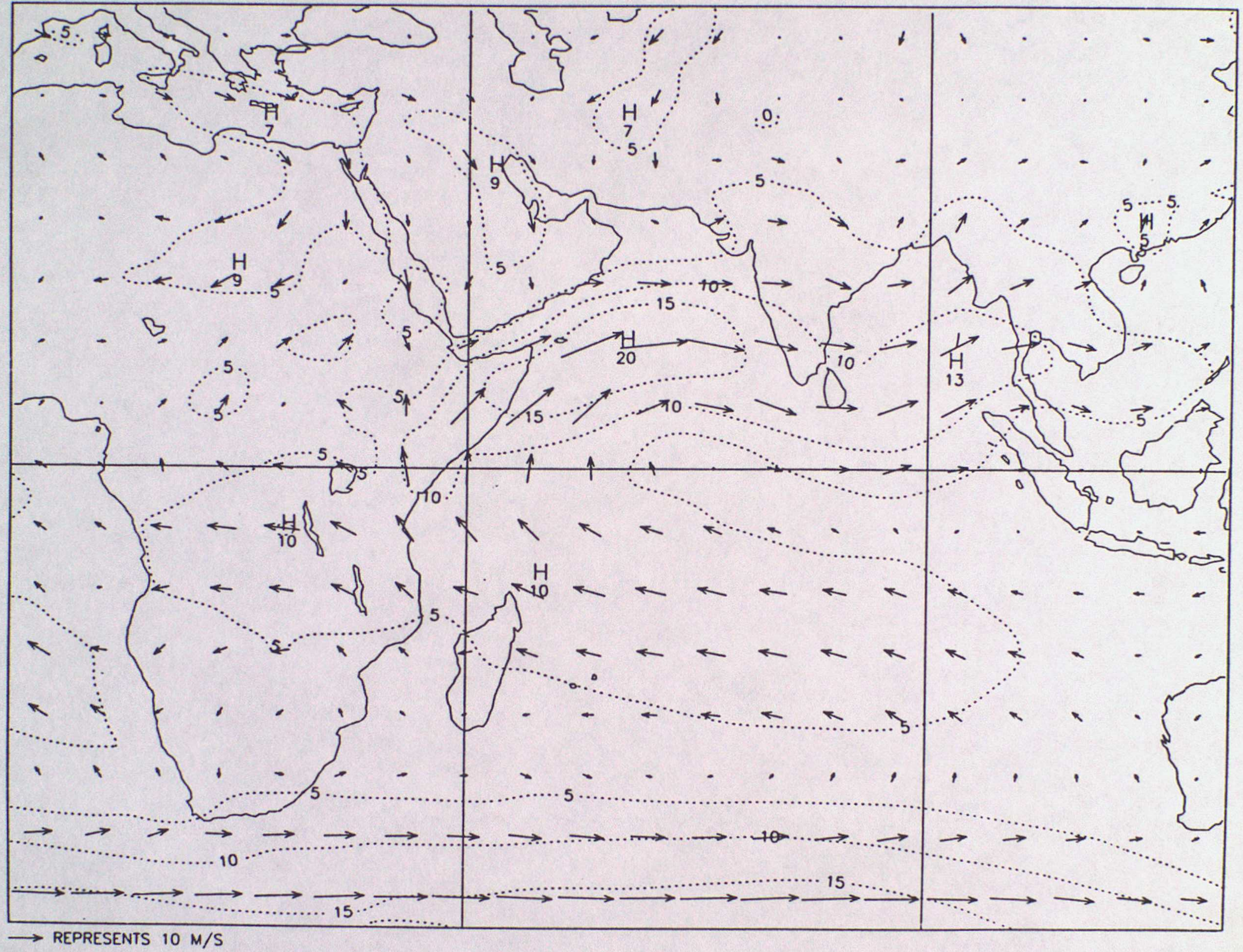
→ REPRESENTS 40 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. JUNE 1989
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/6/1989 DAY 152 TO 12Z ON 30/6/1989 DAY 181
850 MBS. BETWEEN LONGS. 0 E - 120 E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→ REPRESENTS 10 M/S

OPERATIONAL ARCHIVE MEANS.    JUNE    1989
WIND ARROWS AND ISOTACHS  BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM  0Z ON 1/6/1989 DAY 152 TO 12Z ON 30/6/1989 DAY 181
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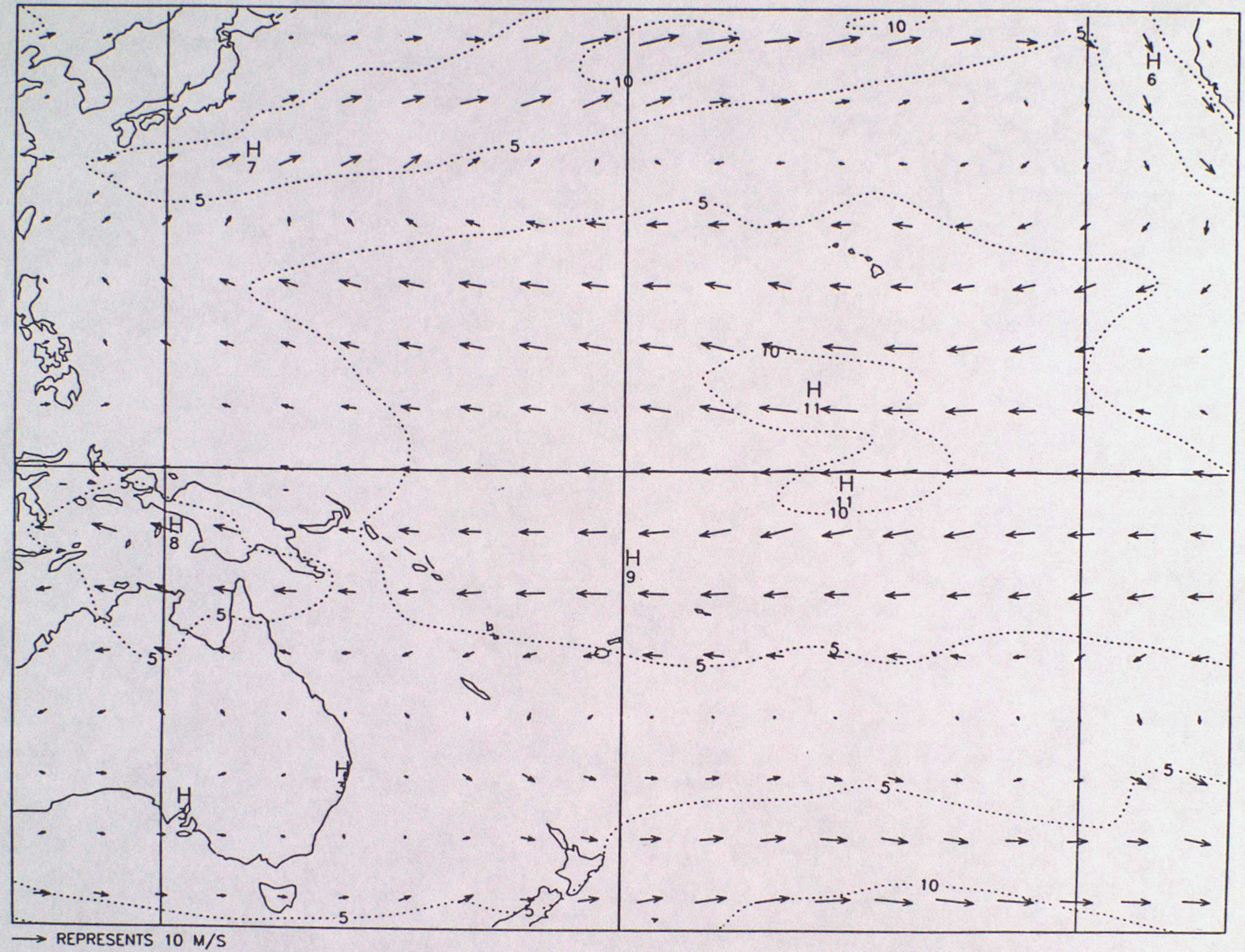
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→ REPRESENTS 10 M/S

OPERATIONAL ARCHIVE MEANS. JUNE 1989
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/6/1989 DAY 152 TO 12Z ON 30/6/1989 DAY 181
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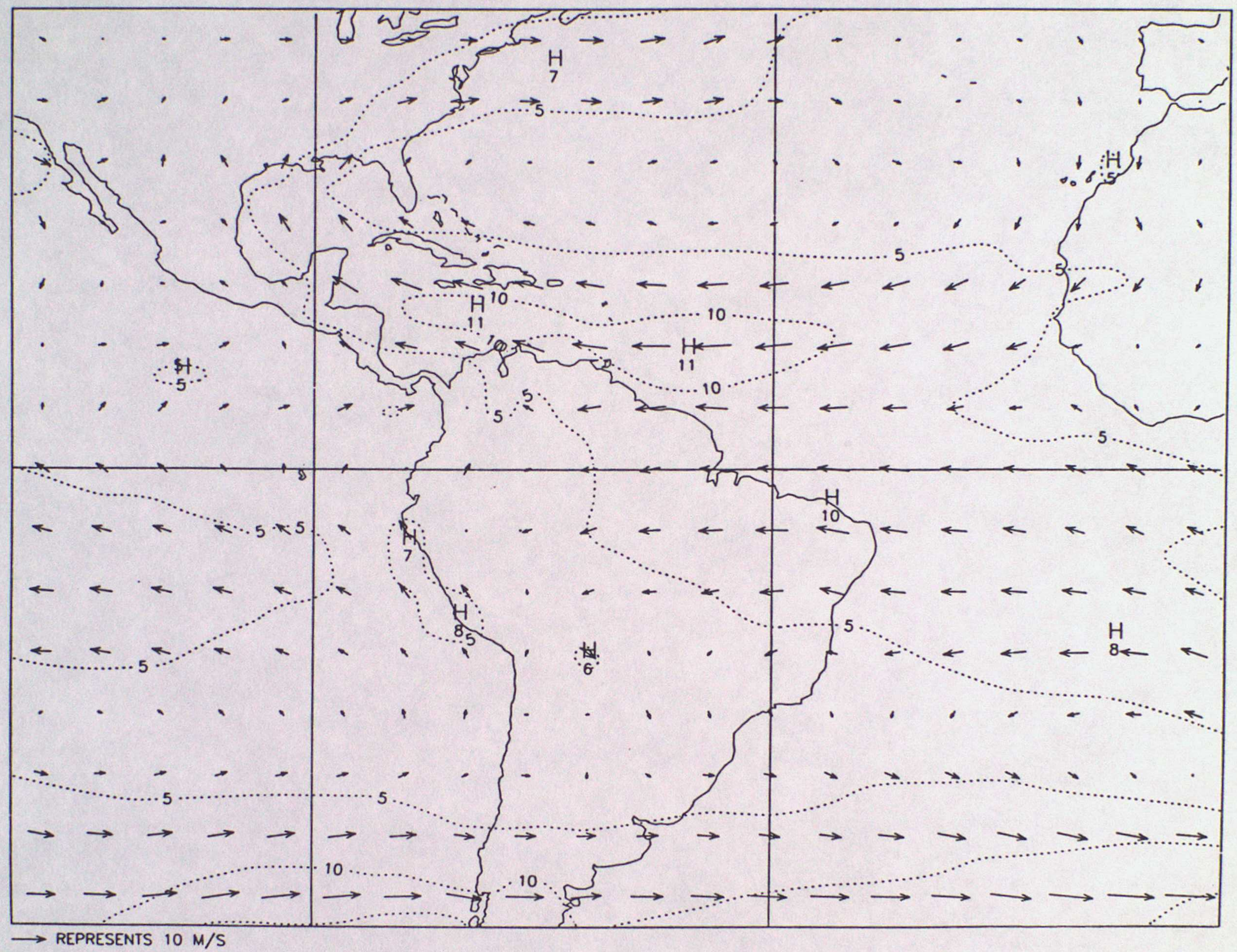
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→ REPRESENTS 10 M/S

OPERATIONAL ARCHIVE MEANS.     JUNE     1989
WIND ARROWS AND ISOTACHS  BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM  0Z ON 1/6/1989 DAY 152 TO 12Z ON 30/6/1989 DAY 181
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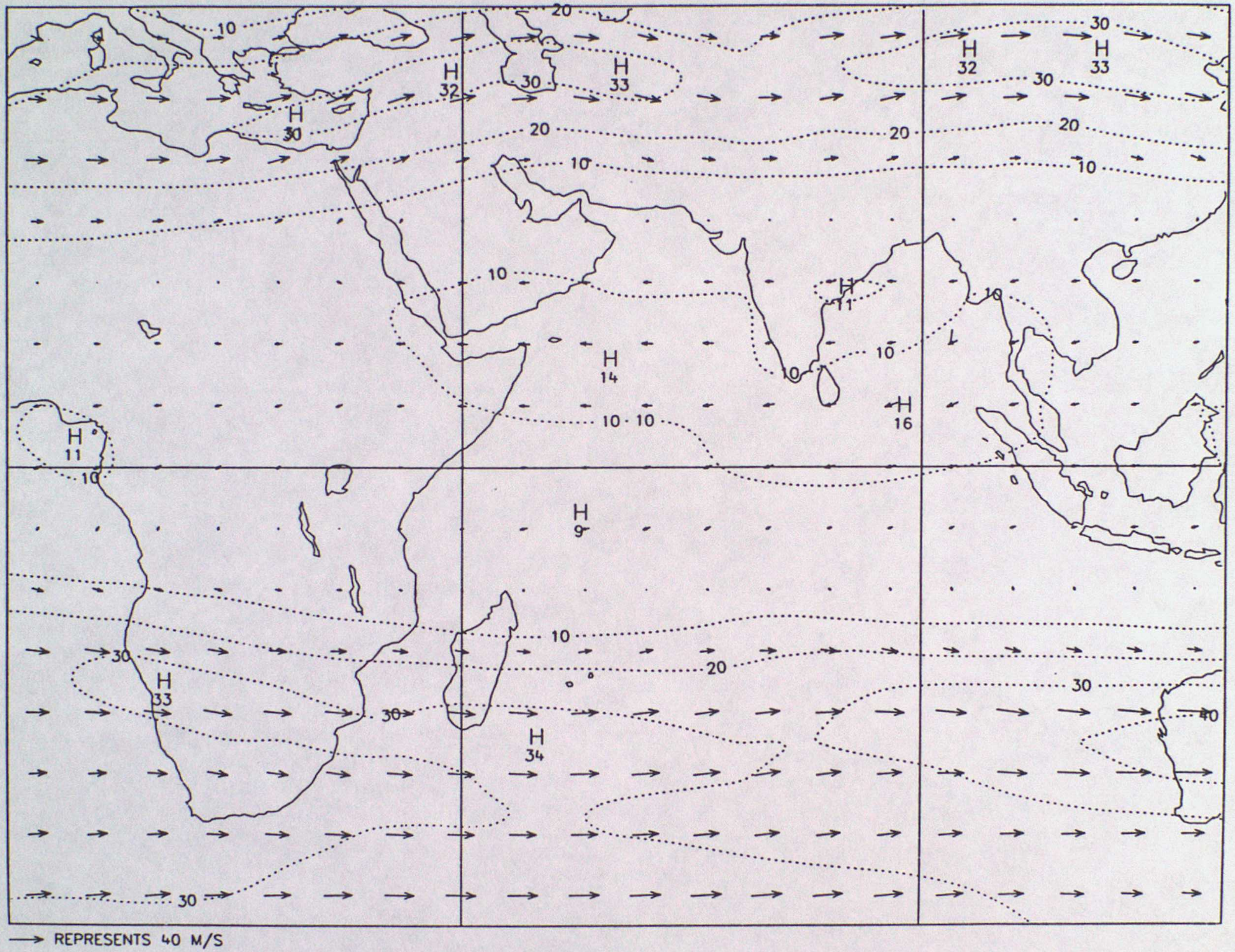
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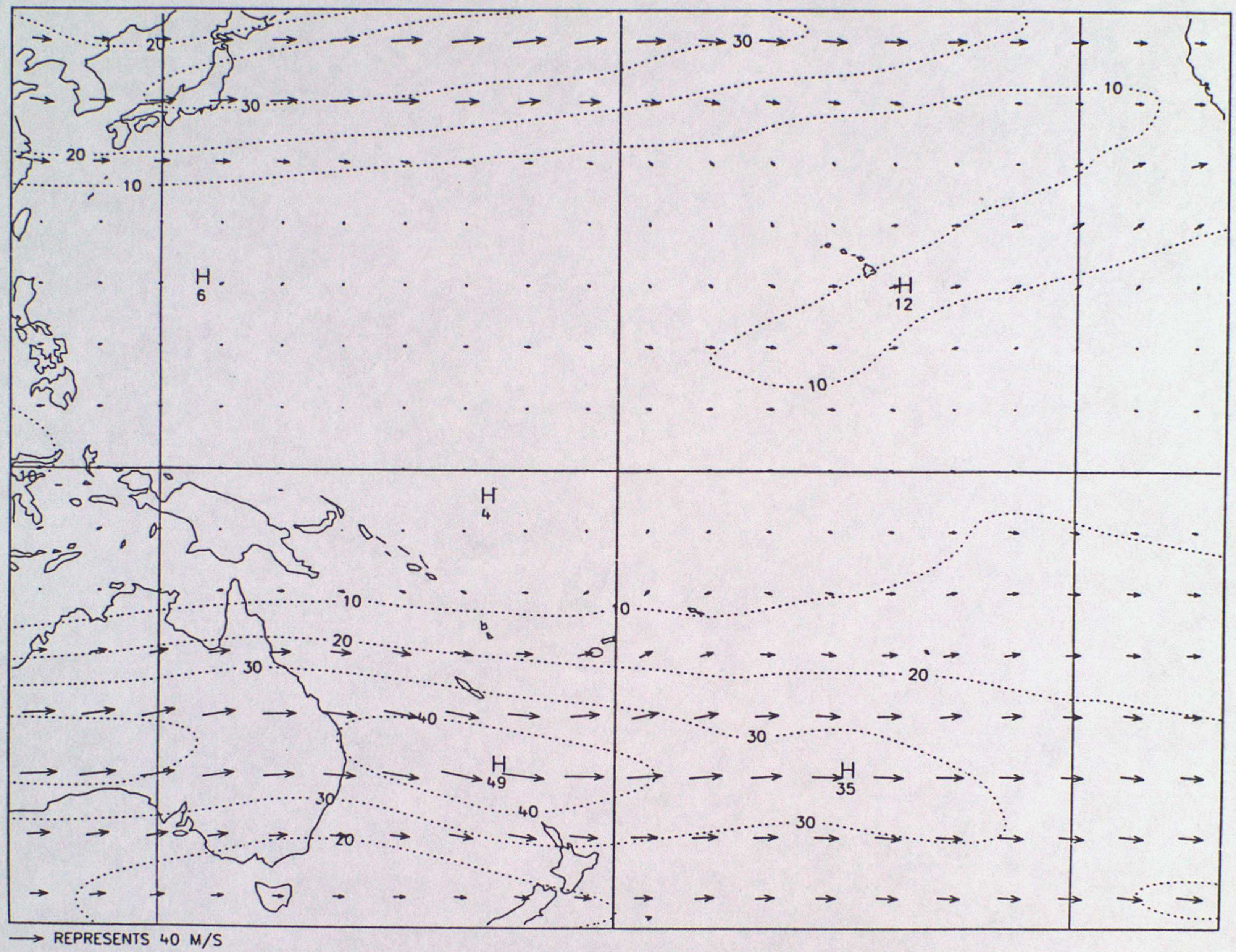
H 16
H 11
10
H 9
10
30
20
30
H 33
30
H 34
40
30
REPRESENTS 40 M/S

OPERATIONAL ARCHIVE MEANS. JUNE 1989
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/6/1989 DAY 152 TO 12Z ON 30/6/1989 DAY 181
250 MBS. BETWEEN LONGS. 120 E - 120 W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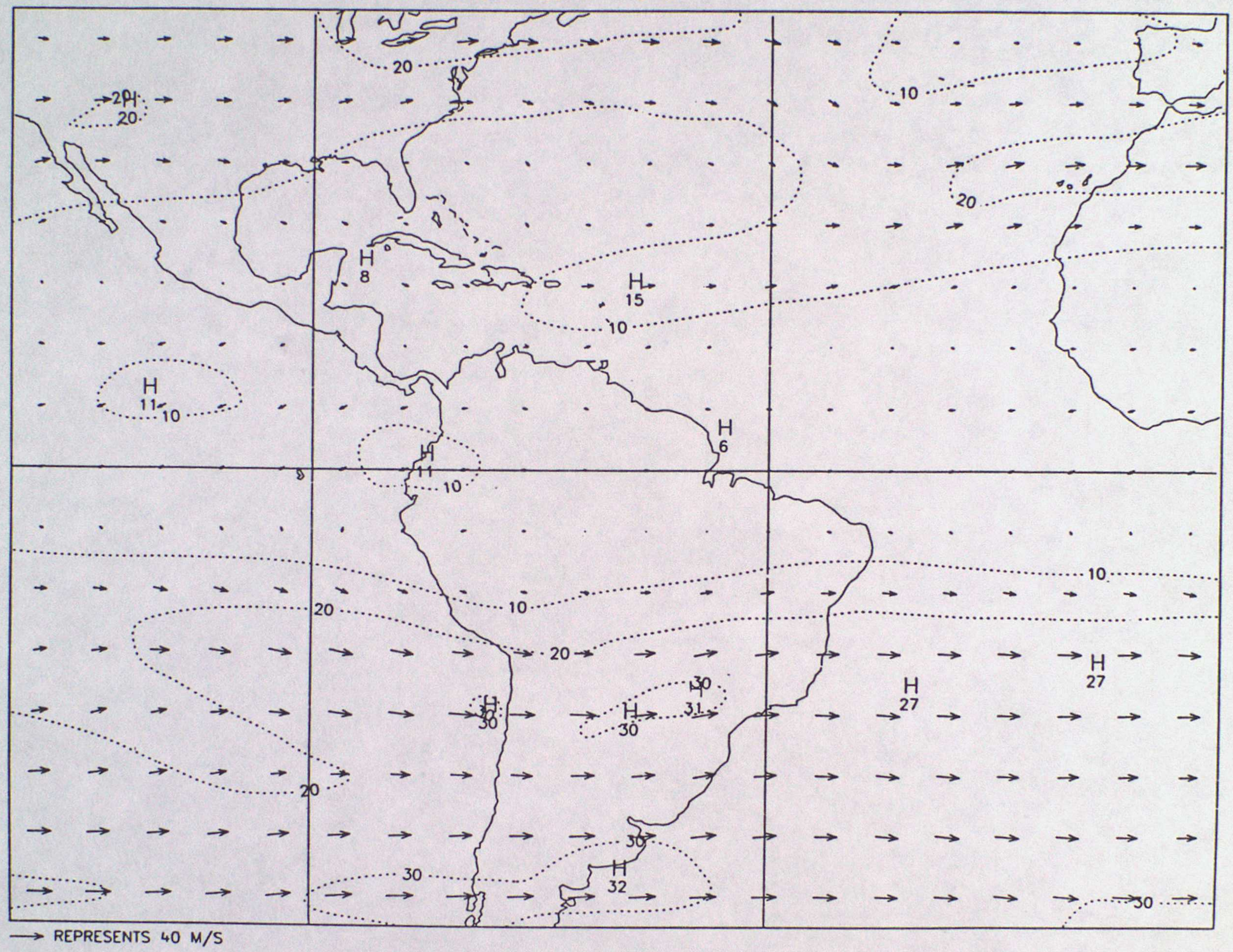
20
→ REPRESENTS 40 M/S

OPERATIONAL ARCHIVE MEANS. JUNE 1989
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/6/1989 DAY 152 TO 12Z ON 30/6/1989 DAY 181
250 MBS. BETWEEN LONGS. 120 W - 0 W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30
H
31
H
27
H
27
20
30
30
H
32
30
→ REPRESENTS 40 M/S

# JULY
# 1989

OPERATIONAL ARCHIVE MEANS. JULY 1989
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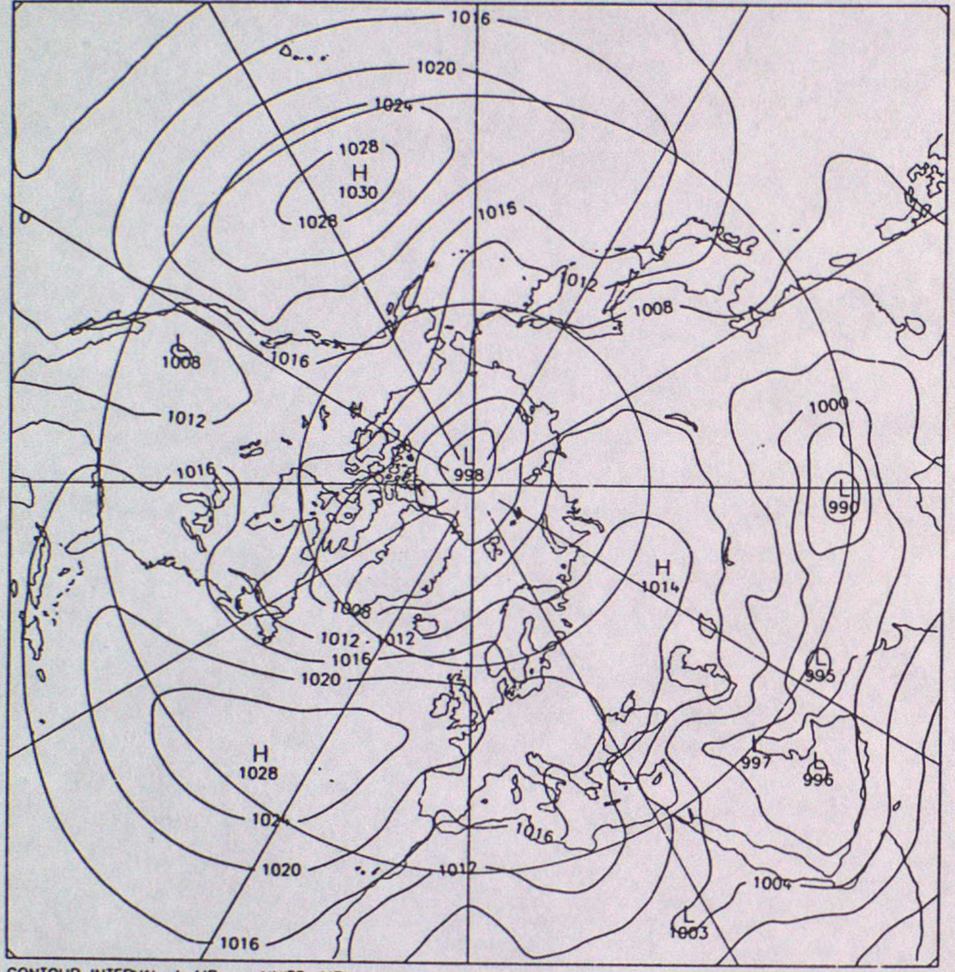
AVERAGE FROM 0Z ON 1/7/1989 DAY 182 TO 12Z ON 31/7/1989 DAY 212
SEA LEVEL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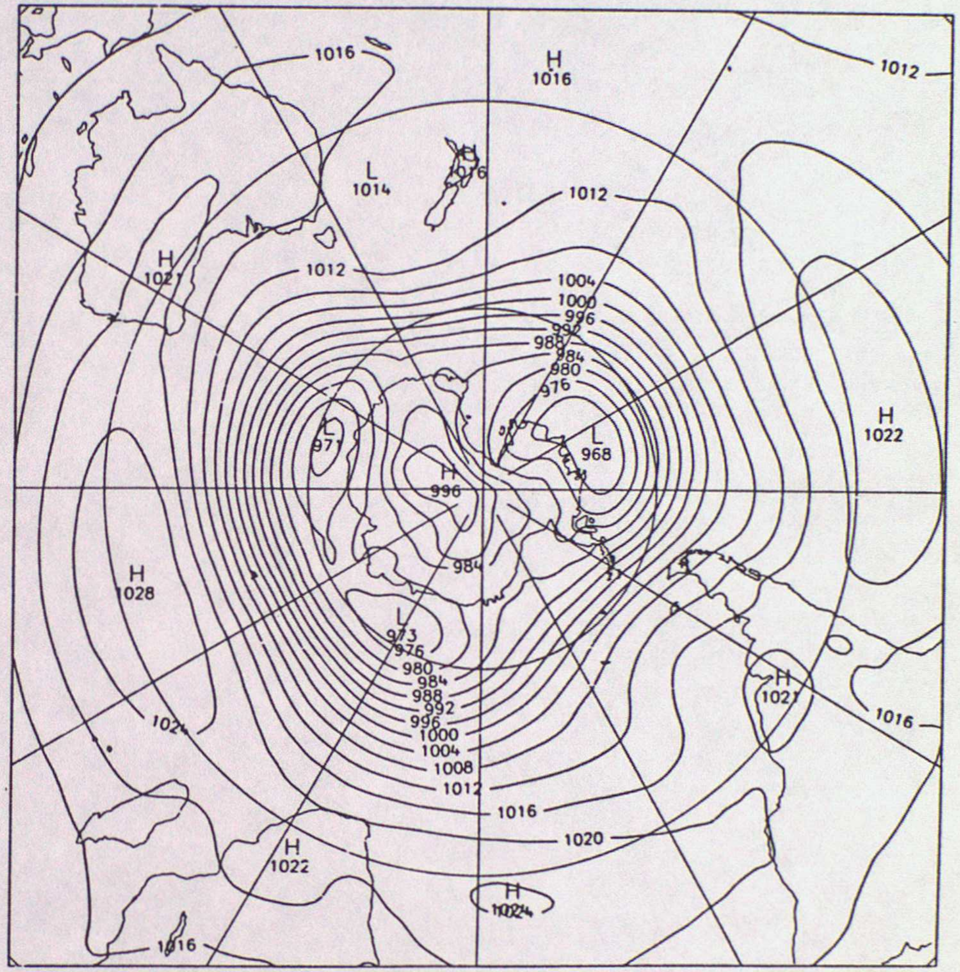
CONTOUR INTERVAL: 4 MB UNITS: MB

OPERATIONAL ARCHIVE MEANS. JULY 1989
PMSL
AVERAGE FROM 0Z ON 1/7/1989 DAY 182 TO 12Z ON 31/7/1989 DAY 212
SEA LEVEL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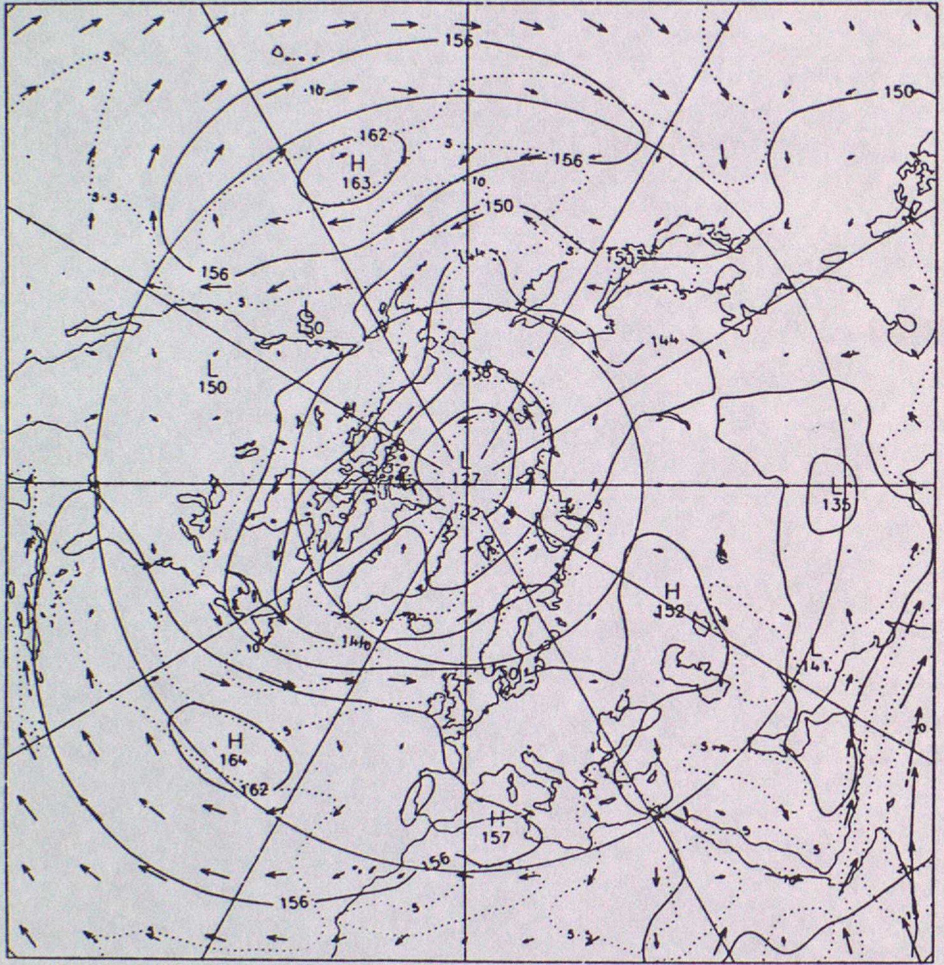
CONTOUR INTERVAL: 4 MB UNITS: MB

OPERATIONAL ARCHIVE MEANS. JULY 1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/7/1989 DAY 182 TO 12Z ON 31/7/1989 DAY 212
LEVEL: 850 MB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156
156

→ REPRESENTS 10 M/S CONTOUR INTERVAL: 60 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. JULY 1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/7/1989 DAY 182 TO 12Z ON 31/7/1989 DAY 212
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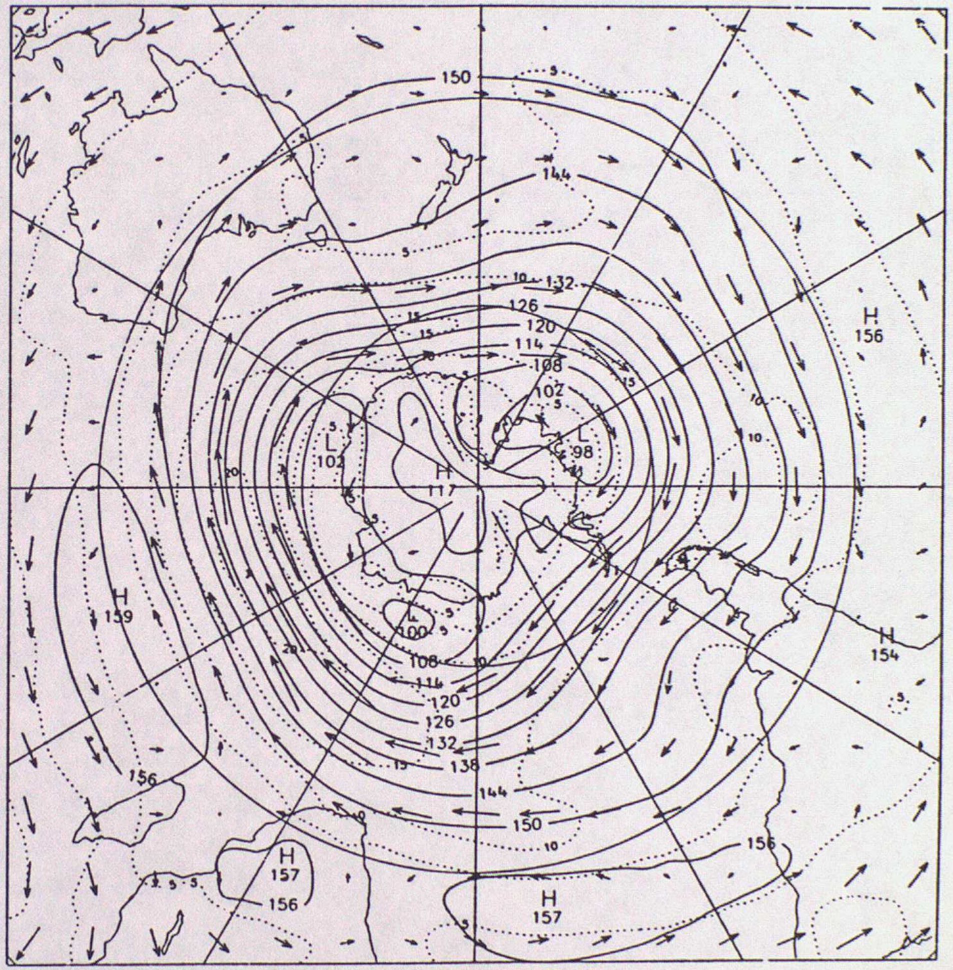
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156
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→ REPRESENTS 10 M/S CONTOUR INTERVAL: 60 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. JULY 1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/7/1989 DAY 182 TO 12Z ON 31/7/1989 DAY 212
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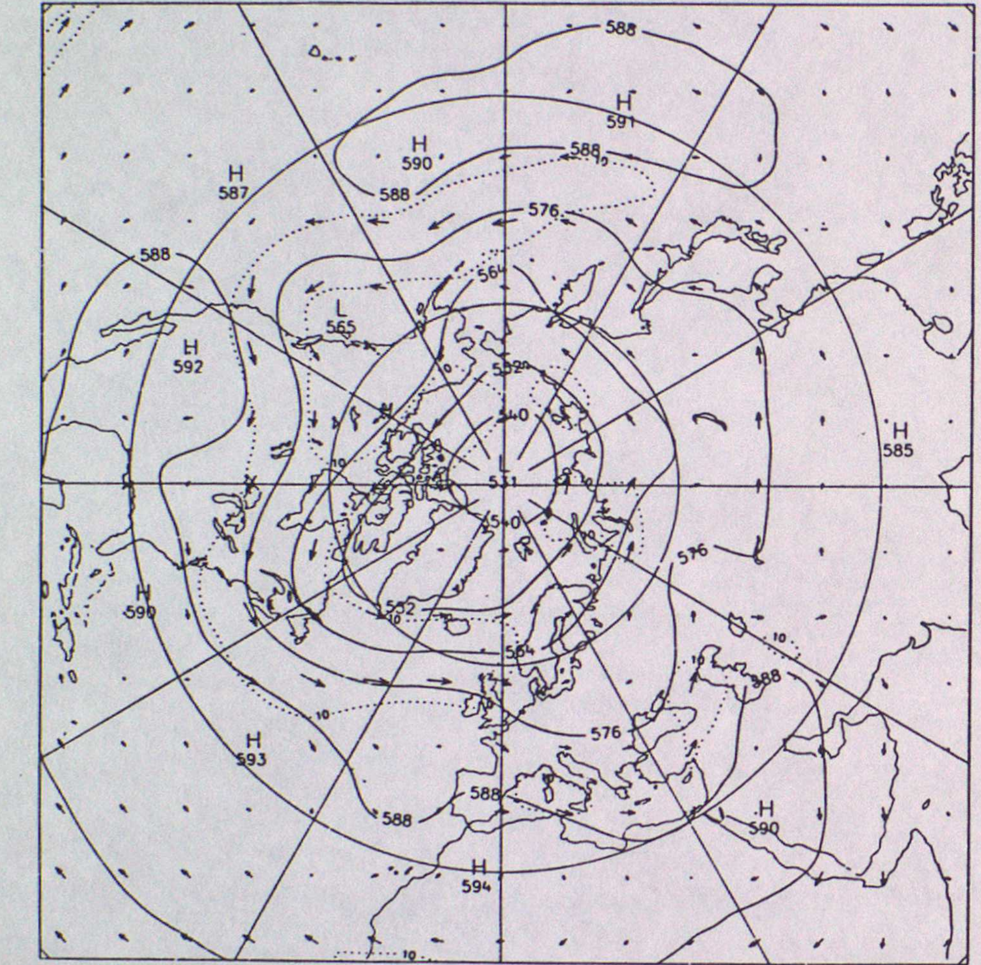
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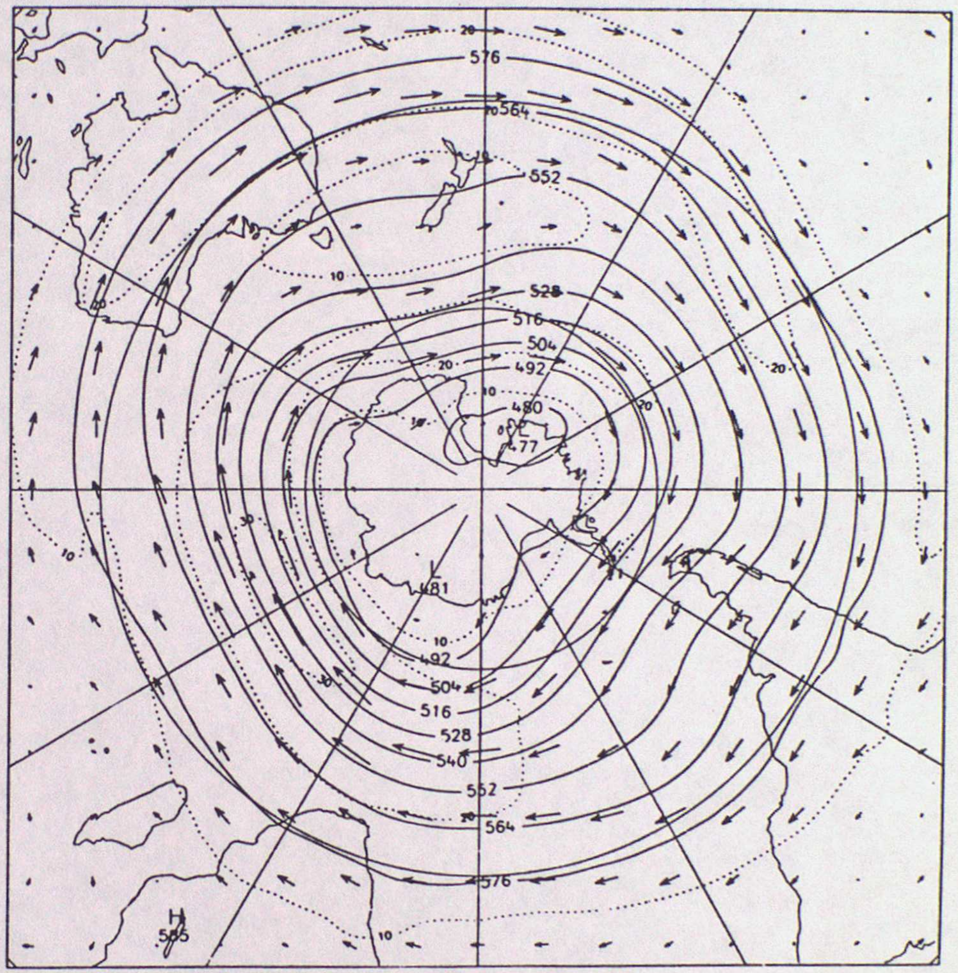
H 590
H 594
H 585

→ REPRESENTS 20 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. JULY 1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/7/1989 DAY 182 TO 12Z ON 31/7/1989 DAY 212
LEVEL: 500 MB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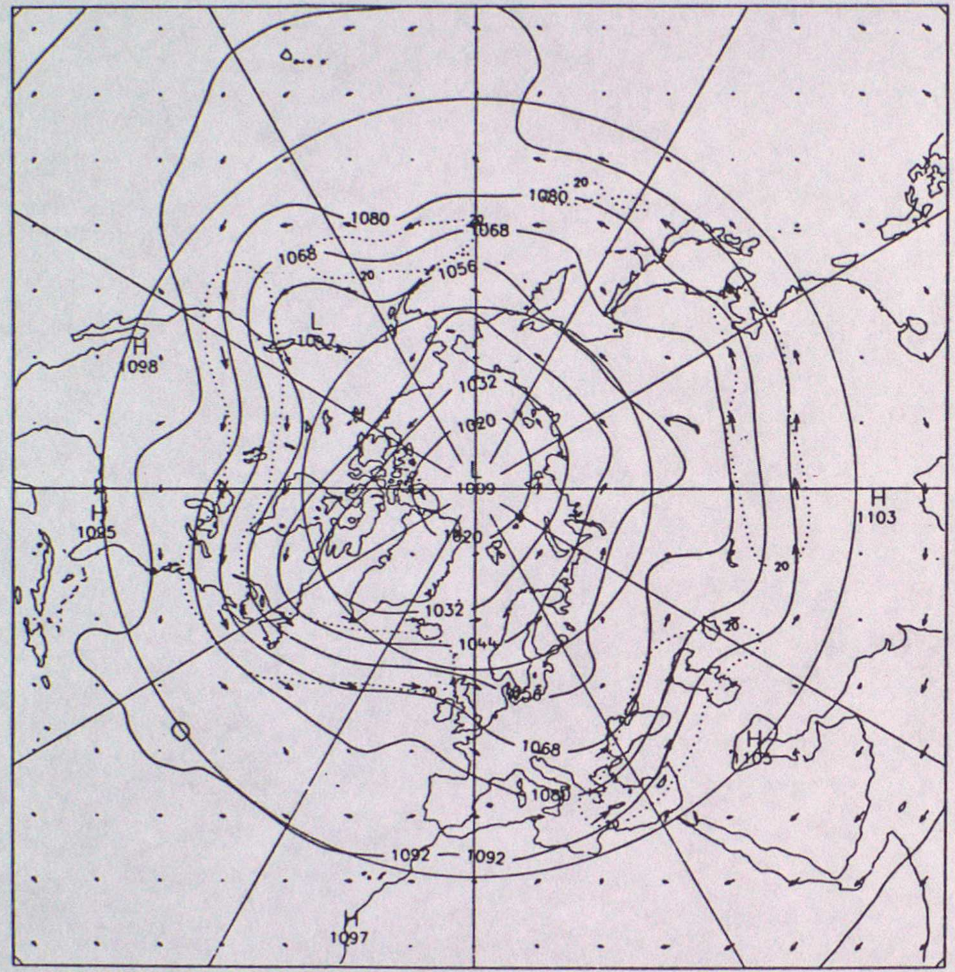
10
H 565

→ REPRESENTS 20 M/S CONTOUR INTERVAL. 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS.  JULY  1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/7/1989 DAY 182 TO 12Z ON 31/7/1989 DAY 212
LEVEL: 250 MB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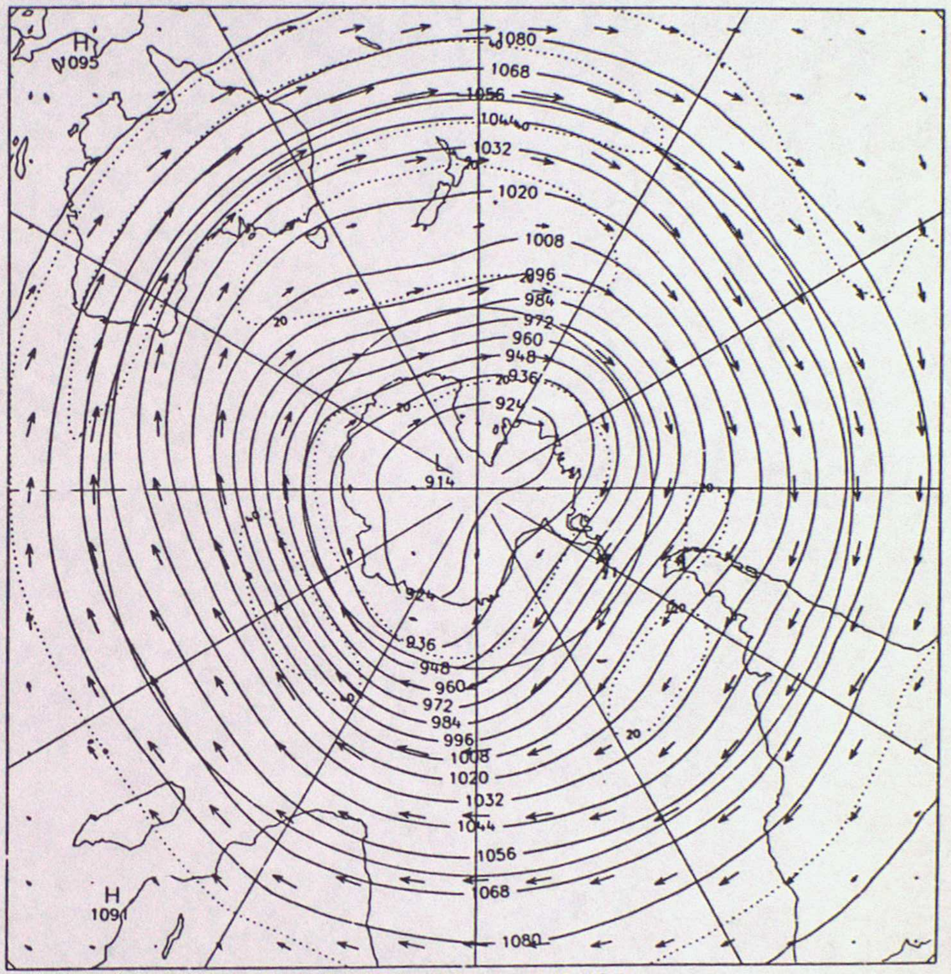
1032
1044
1056
1068
1080
1092
1092
H
1097
H
1103
H
1105
20

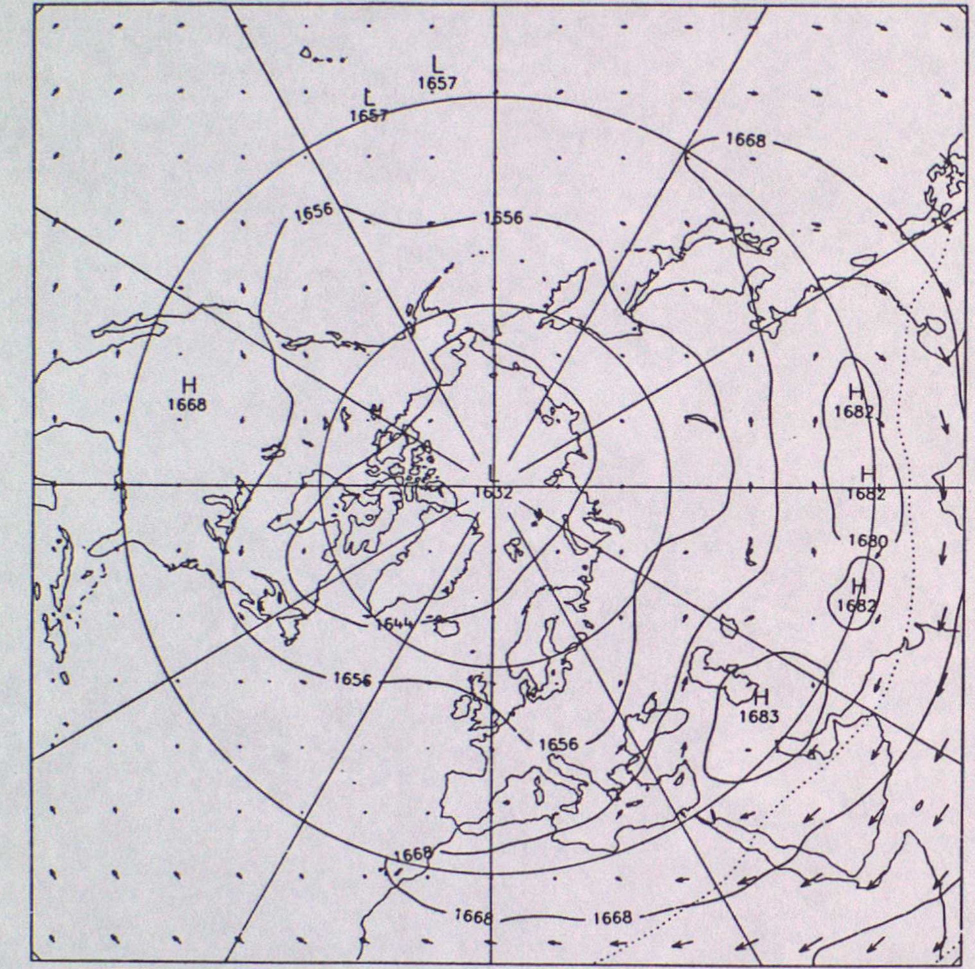
→ REPRESENTS 40 M/S  CONTOUR INTERVAL: 120 M  UNITS: 10 M

OPERATIONAL ARCHIVE MEANS.  JULY  1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/7/1989 DAY 182 TO 12Z ON 31/7/1989 DAY 212
LEVEL: 250 MB


H
1095
1080
1068
1056
1044
1032
1020
1008
996
984
972
960
948
936
924
L
914
20
924
936
948
960
972
984
996
1008
1020
1032
1044
1056
1068
1080
H
1091

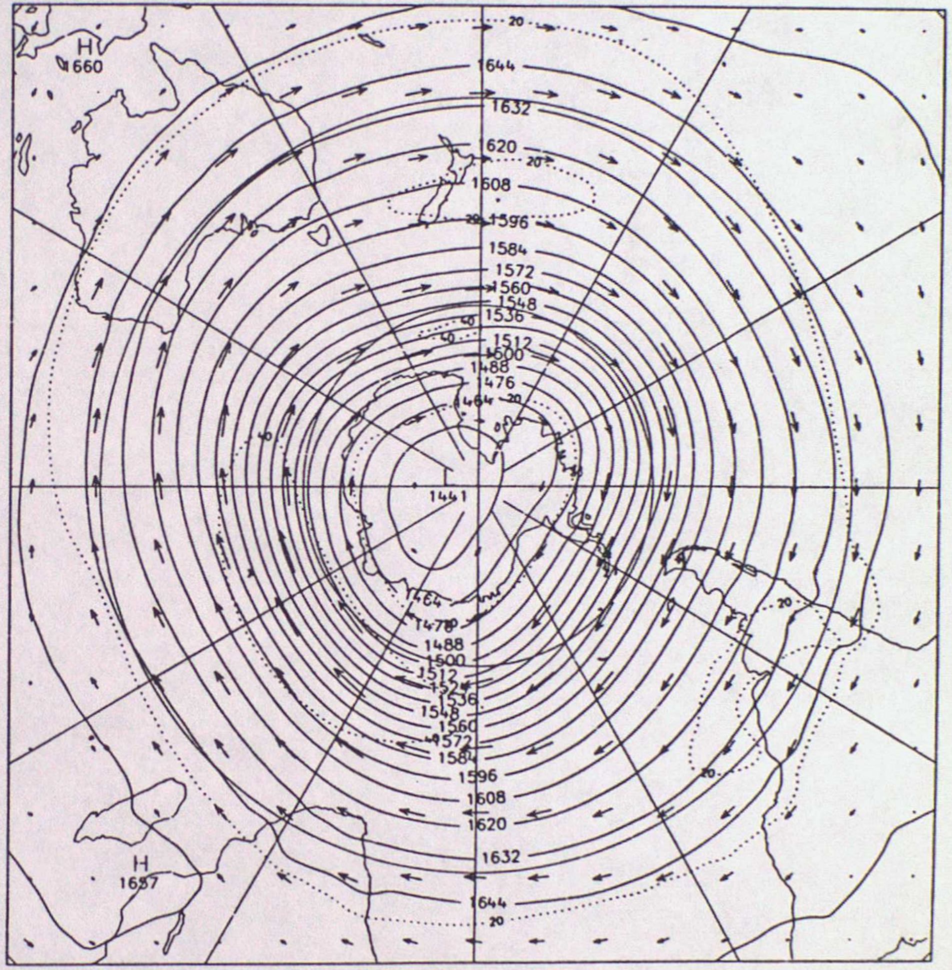
→ REPRESENTS 40 M/S  CONTOUR INTERVAL: 120 M  UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. JULY 1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/7/1989 DAY 182 TO 12Z ON 31/7/1989 DAY 212
LEVEL: 100 MB


L
1657
L
1657
1668
1656
1656
H
1668
L
1632
H
1682
H
1682
1680
H
1682
1644
1656
H
1683
1656
1668
1668
1668

→ REPRESENTS 40 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. JULY 1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/7/1989 DAY 182 TO 12Z ON 31/7/1989 DAY 212
LEVEL: 100 MB


H
1660
20
1644
1632
1620
20
1608
1596
1584
1572
1560
1548
1536
40
1512
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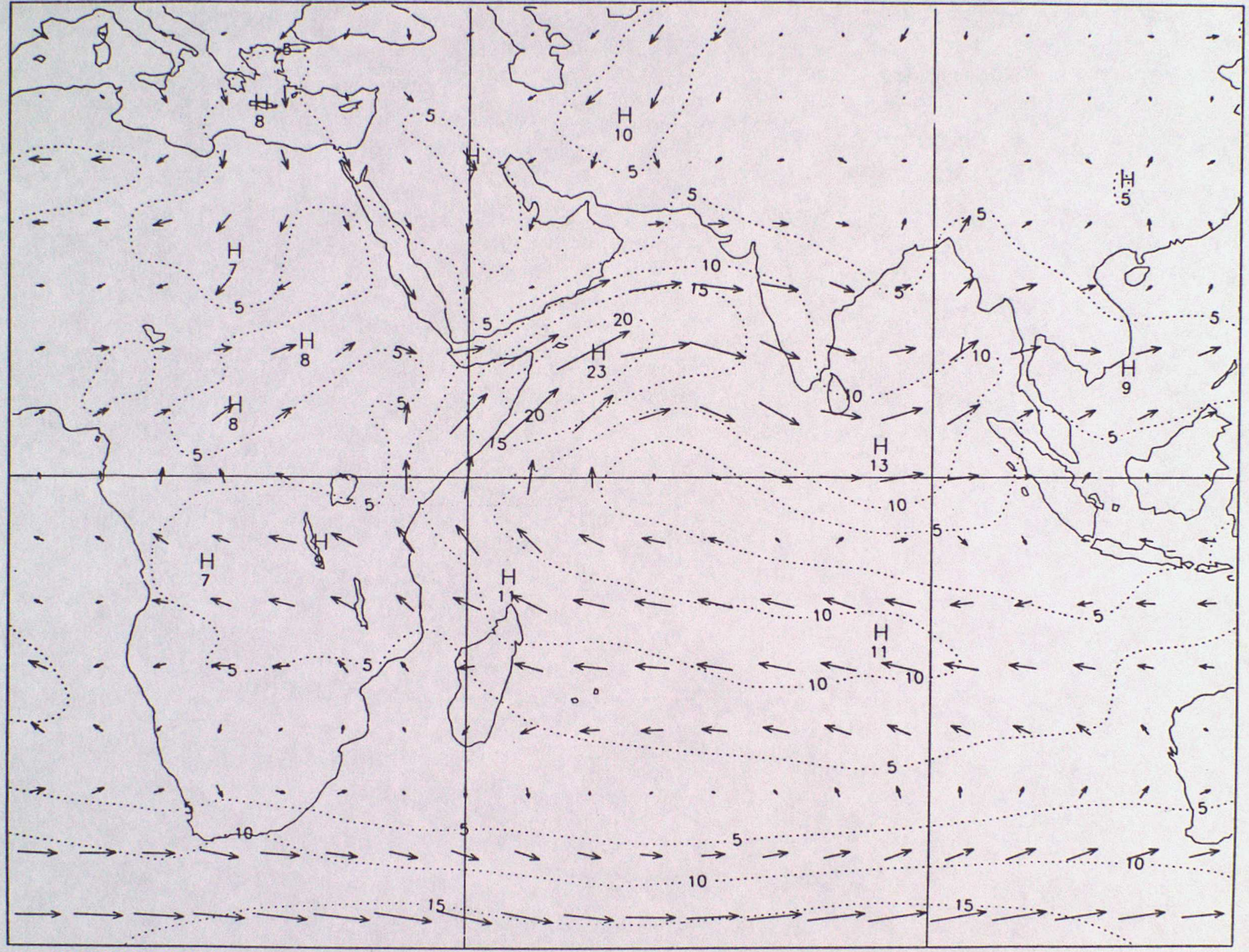
1488
1476
1464
20
L
1441
1464
1478
1488
1500
1512
1524
1536
1548
1560
1572
1584
1596
1608
1620
1632
1644
20
H
1657

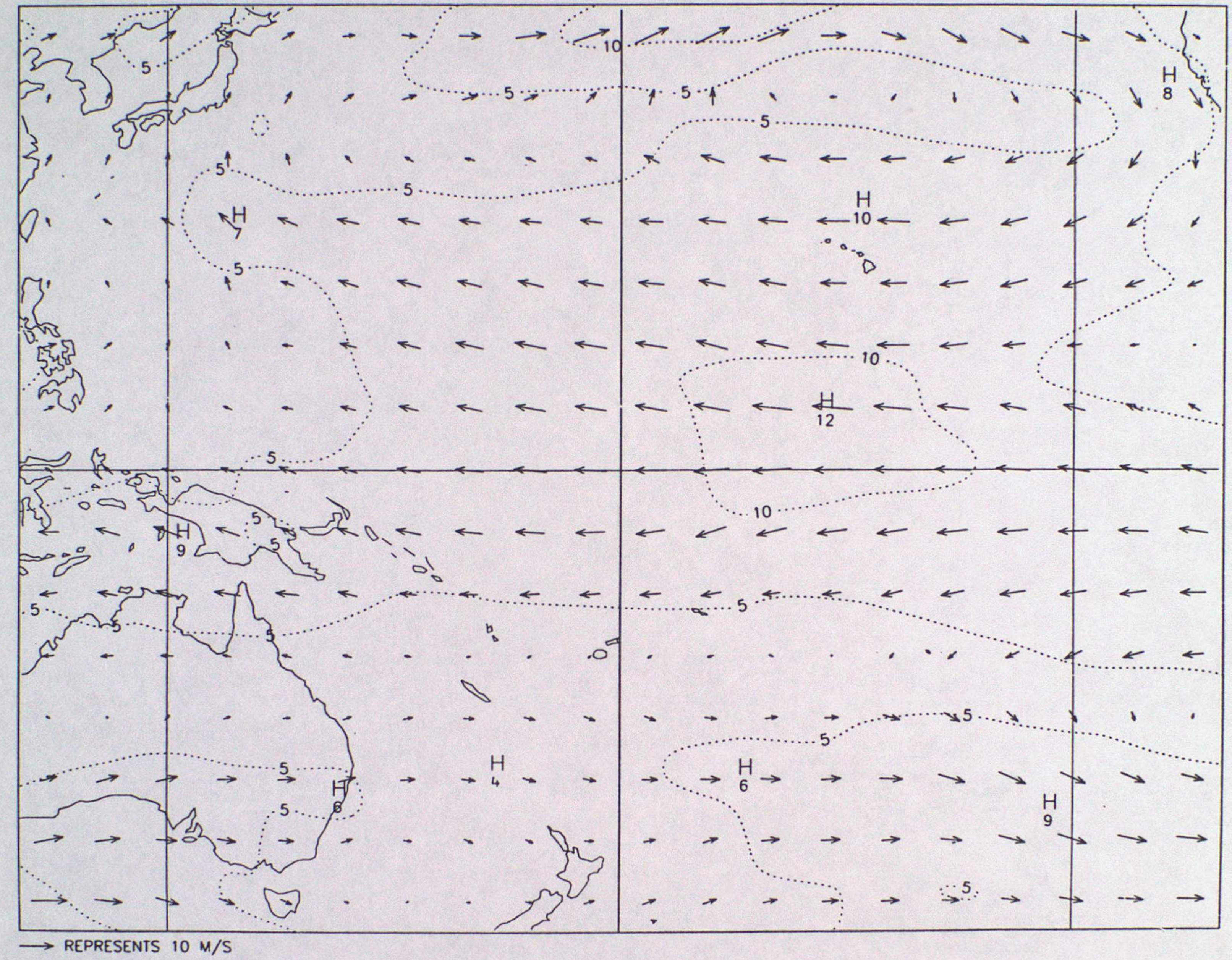
→ REPRESENTS 40 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. JULY 1989
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/7/1989 DAY 182 TO 12Z ON 31/7/1989 DAY 212
850 MBS. BETWEEN LONGS. 0 E - 120 E

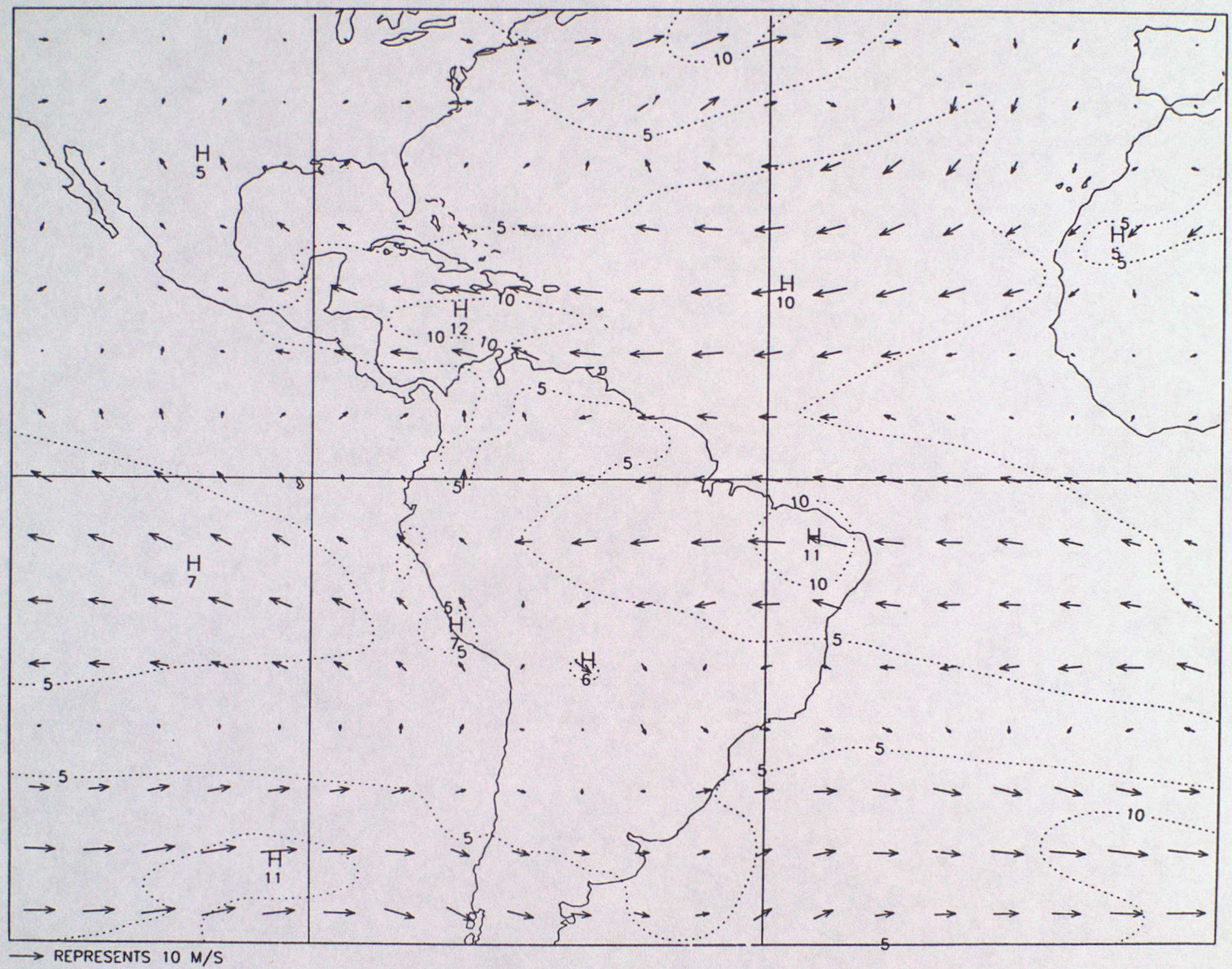

H 8
H 10
H 5
H 7
H 8
H 23
H 9
H 8
H 13
H 9
H 7
H 11
H 11
5
10
15
20

→ REPRESENTS 10 M/S

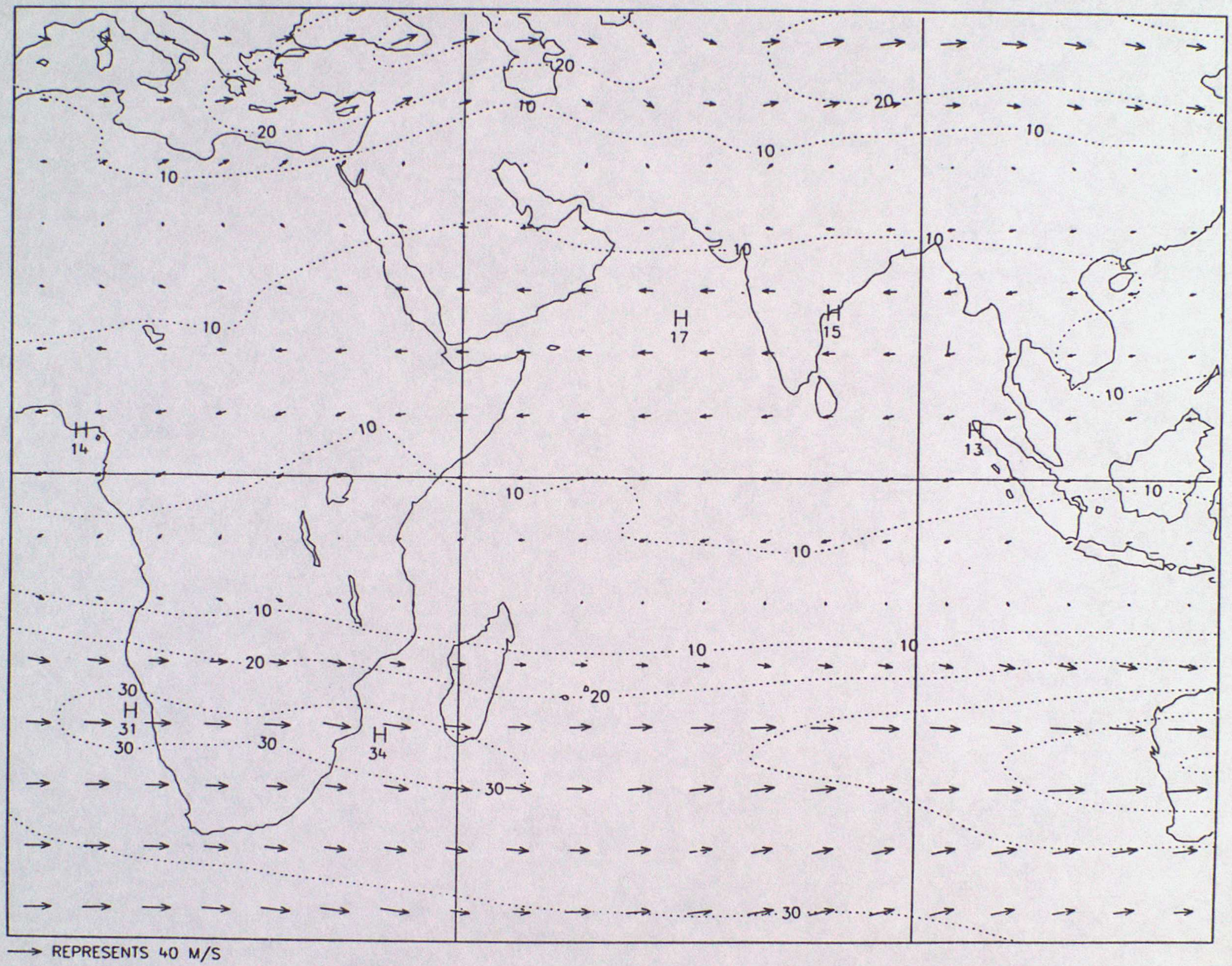
OPERATIONAL ARCHIVE MEANS. JULY 1989
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/7/1989 DAY 182 TO 12Z ON 31/7/1989 DAY 212
850 MBS. BETWEEN LONGS. 120 E - 120 W


5
10
5
5
5
H 8
5
H 7
5
H 10
10
H 12
5
10
H 9
5
5
5
5
5
5
5
H 6
H 4
H 6
5
5
H 9
5
→ REPRESENTS 10 M/S

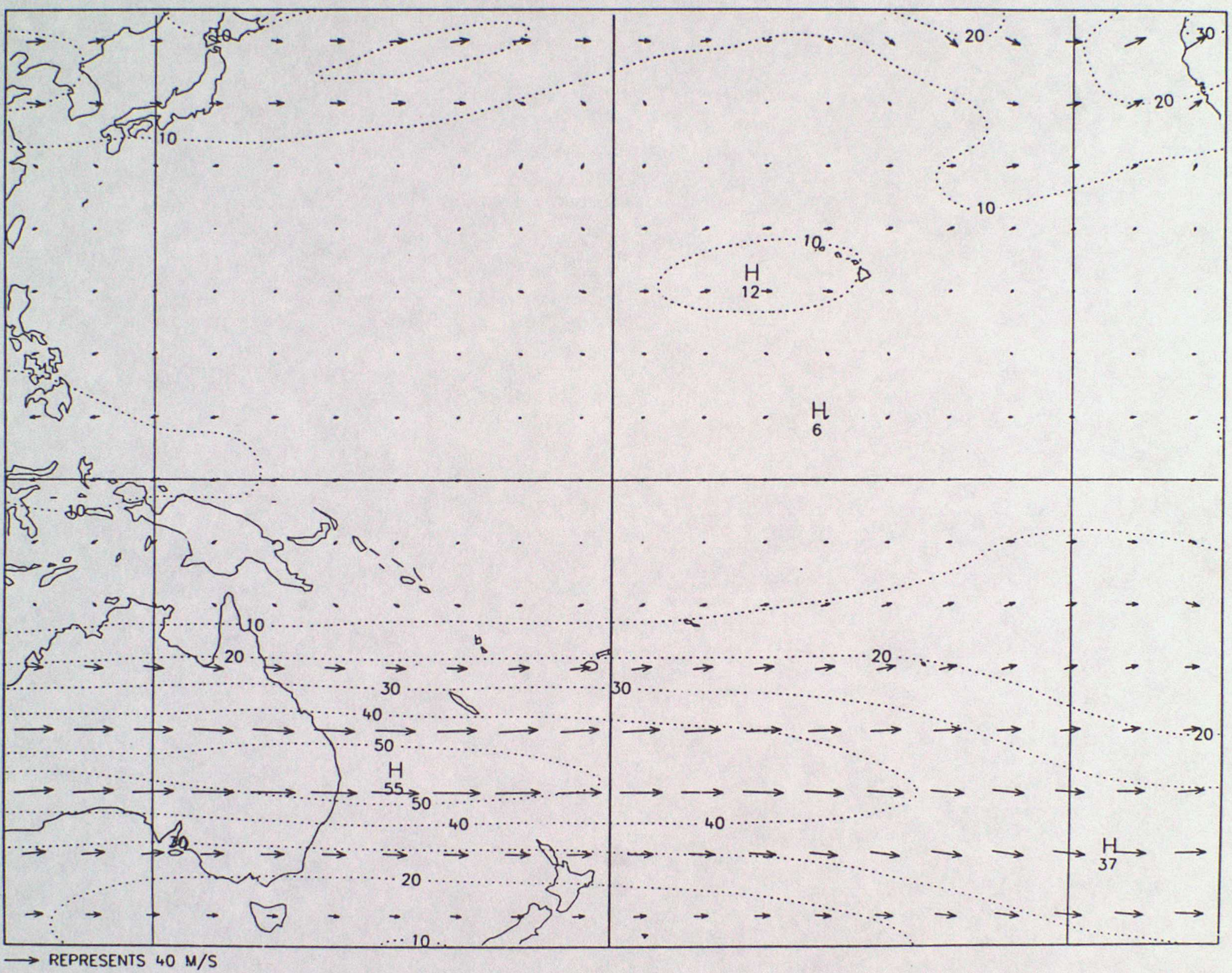
OPERATIONAL ARCHIVE MEANS. JULY 1989
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/7/1989 DAY 182 TO 12Z ON 31/7/1989 DAY 212
850 MBS. BETWEEN LONGS. 120 W - 0 W


H 5
H 12
H 10
H 5
H 7
H 11
H 7
H 6
H 11
10
5
→ REPRESENTS 10 M/S

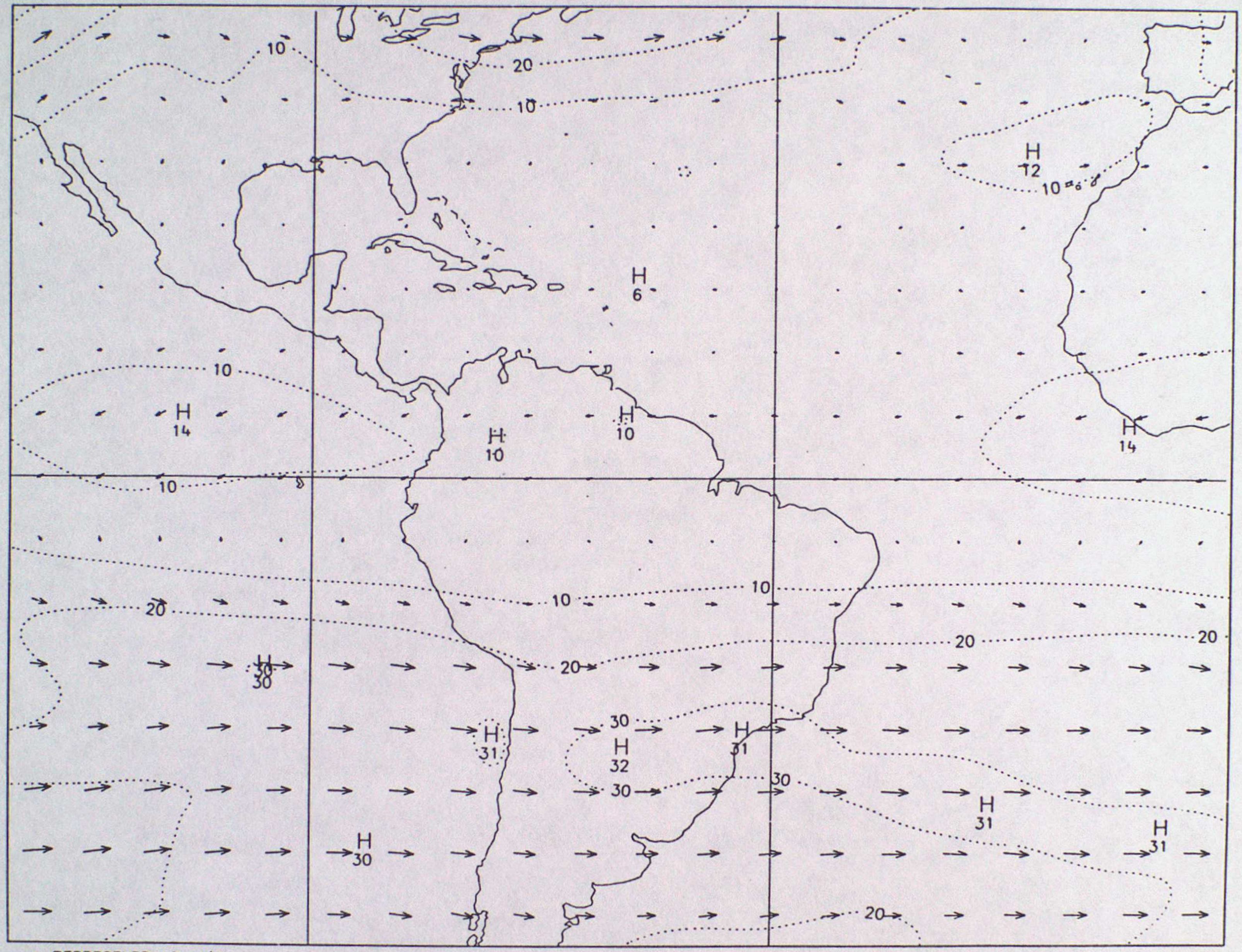
OPERATIONAL ARCHIVE MEANS. JULY 1989
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/7/1989 DAY 182 TO 12Z ON 31/7/1989 DAY 212
250 MBS. BETWEEN LONGS. 0 E - 120 E


20
10
20
10
20
10
10
10
10
10
H
17
H
15
L
10
H
14
10
H
13
10
10
10
10
10
10
10
20
20
30
H
31
30
30
H
34
30
30
→ REPRESENTS 40 M/S

OPERATIONAL ARCHIVE MEANS. JULY 1989
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/7/1989 DAY 182 TO 12Z ON 31/7/1989 DAY 212
250 MBS. BETWEEN LONGS. 120 E - 120 W


10
20
30
20
10
10
H
12
H
6
10
10
20
30
30
40
20
50
H
55
50
40
40
30
20
H
37
20
10
→ REPRESENTS 40 M/S

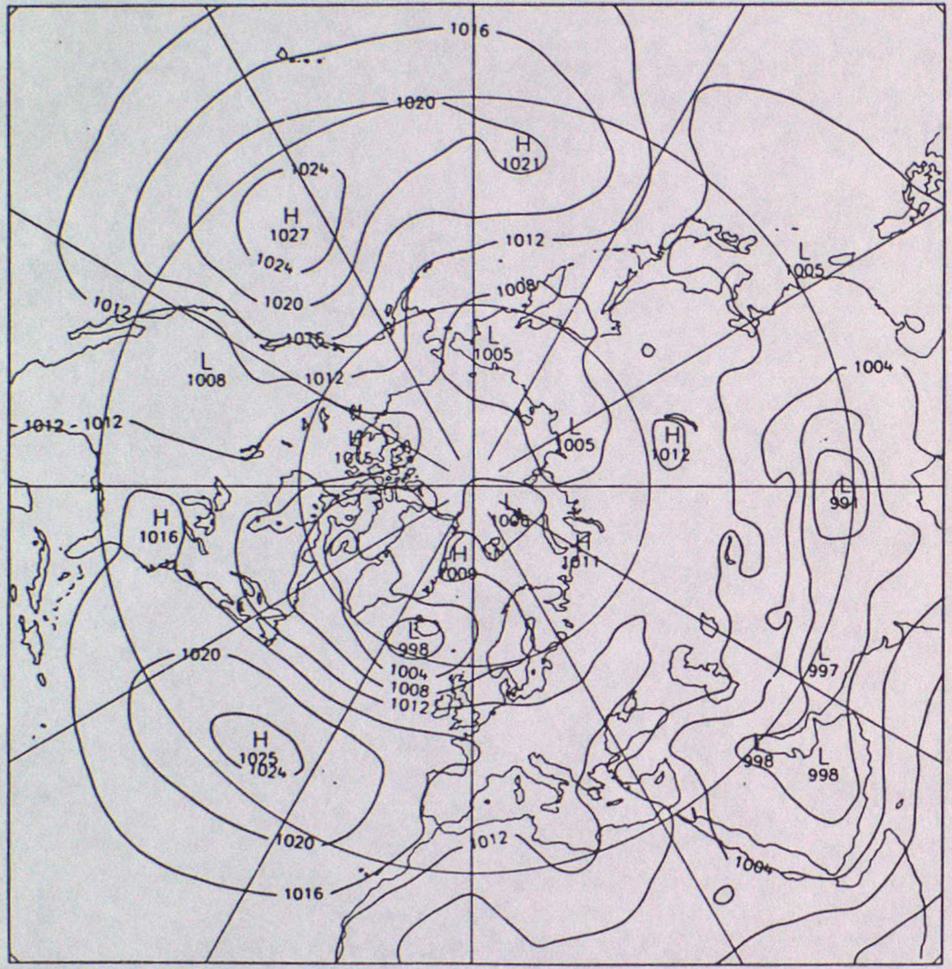
OPERATIONAL ARCHIVE MEANS. JULY 1989
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/7/1989 DAY 182 TO 12Z ON 31/7/1989 DAY 212
250 MBS. BETWEEN LONGS. 120 W - 0 W


10
20
10
H
12
10
H
6
10
H
14
H
10
H
10
H
14
10
10
10
20
10
20
20
20
H
30
H
31
30
H
32
H
31
30
30
H
31
H
30
H
31
20

→ REPRESENTS 40 M/S

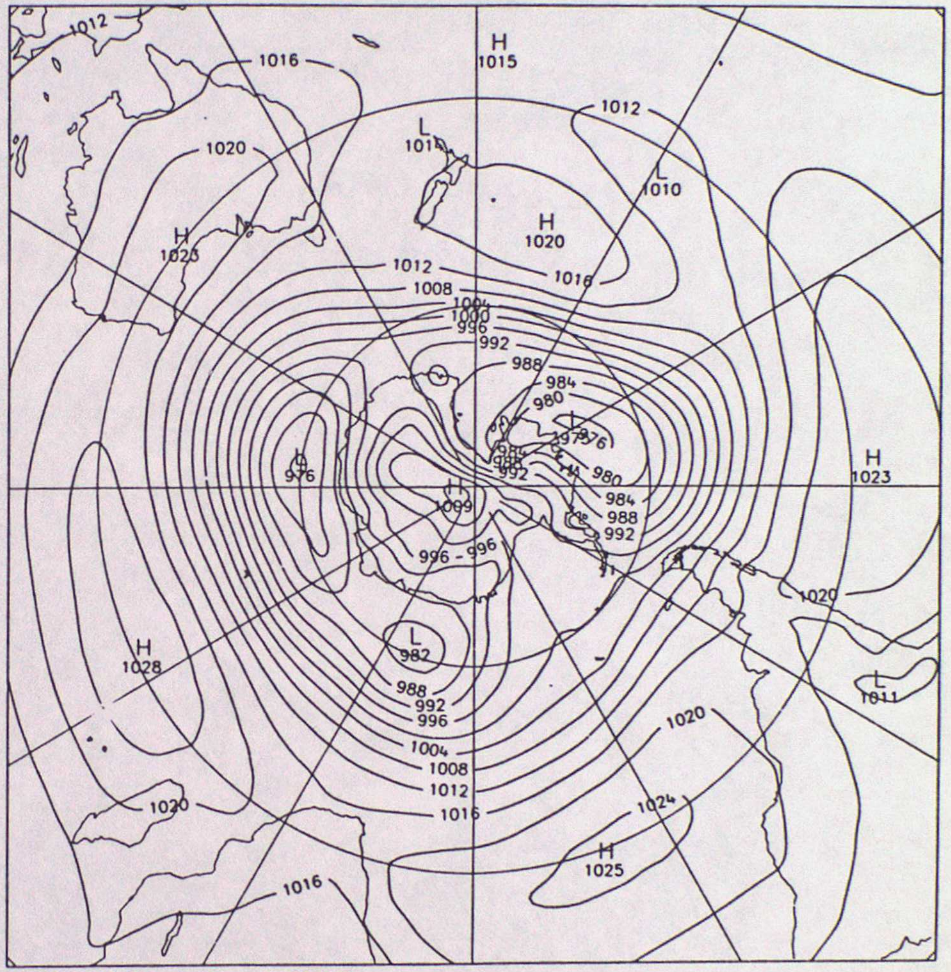
# AUGUST
# 1989

OPERATIONAL ARCHIVE MEANS.    AUGUST    1989
PMSL
AVERAGE FROM  0Z ON 1/8/1989 DAY 213 TO 12Z ON 31/8/1989 DAY 243
SEA LEVEL


1016
1020
H
1021
1024
H
1027
1024
1012
1020
1008
1016
L
1008
1012
L
1005
1012 - 1012
L
1005
H
1012
1004
L
994
1015
H
1016
L
1008
H
1009
1011
L
998
1004
1008
1012
1020
H
1025
1024
L
997
998
L
998
1020
1012
1016
1004

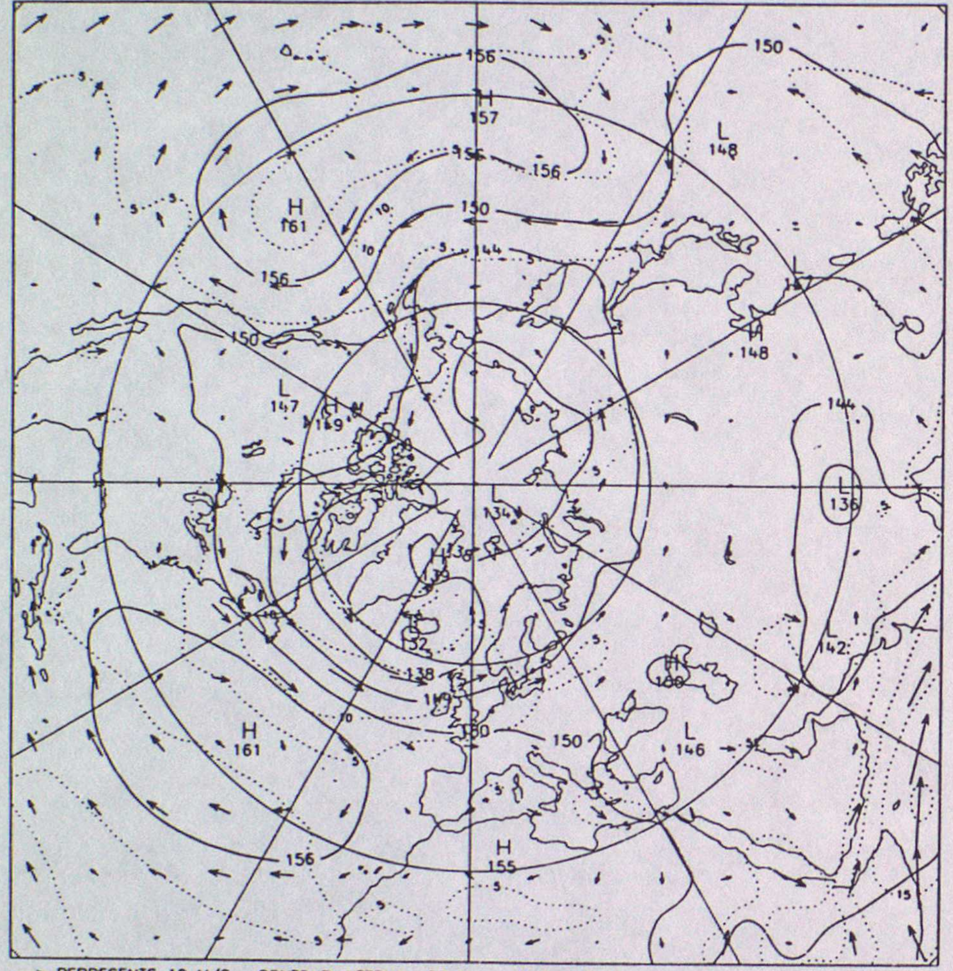
CONTOUR INTERVAL: 4 MB    UNITS: MB

OPERATIONAL ARCHIVE MEANS.    AUGUST    1989
PMSL
AVERAGE FROM  0Z ON 1/8/1989 DAY 213 TO 12Z ON 31/8/1989 DAY 243
SEA LEVEL


1012
1016
H
1015
1012
1020
L
1014
L
1010
H
1020
H
1023
1012
1016
1008
1004
1000
996
992
988
984
980
976
976
H
1009
980
984
988
992
996 - 996
H
1028
L
982
988
992
996
1004
1008
1012
1016
1020
L
1011
1020
1024
H
1025
1020
1016

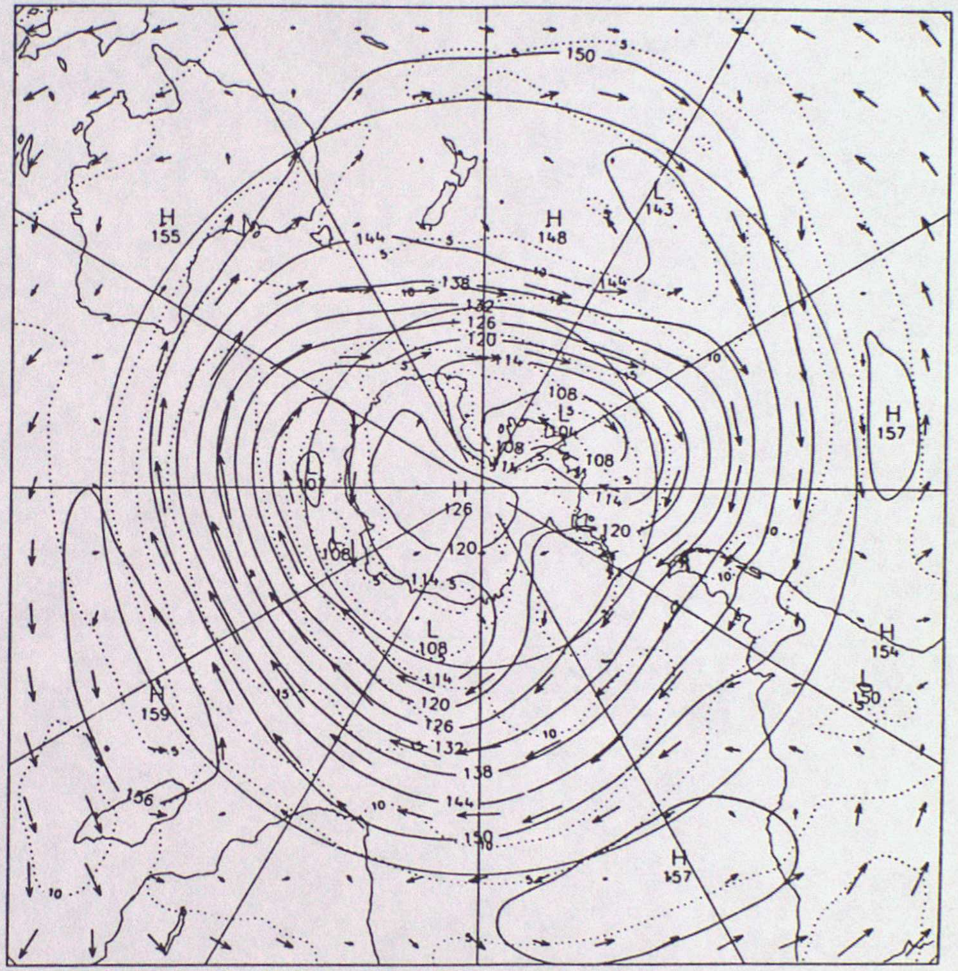
CONTOUR INTERVAL: 4 MB    UNITS: MB

OPERATIONAL ARCHIVE MEANS.     AUGUST     1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM  0Z ON 1/8/1989 DAY 213 TO 12Z ON 31/8/1989 DAY 243
LEVEL:  850 MB


H
157
H
161
L
148
L
147
H
149
H
148
L
136
H
160
L
146
H
161
H
155
L
142
156
150
144
138
134
132
5
10
15

→ REPRESENTS 10 M/S     CONTOUR INTERVAL: 60 M     UNITS: 10 M

OPERATIONAL ARCHIVE MEANS.     AUGUST     1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM  0Z ON 1/8/1989 DAY 213 TO 12Z ON 31/8/1989 DAY 243
LEVEL:  850 MB


H
155
H
148
L
143
H
157
H
126
L
107
L
108
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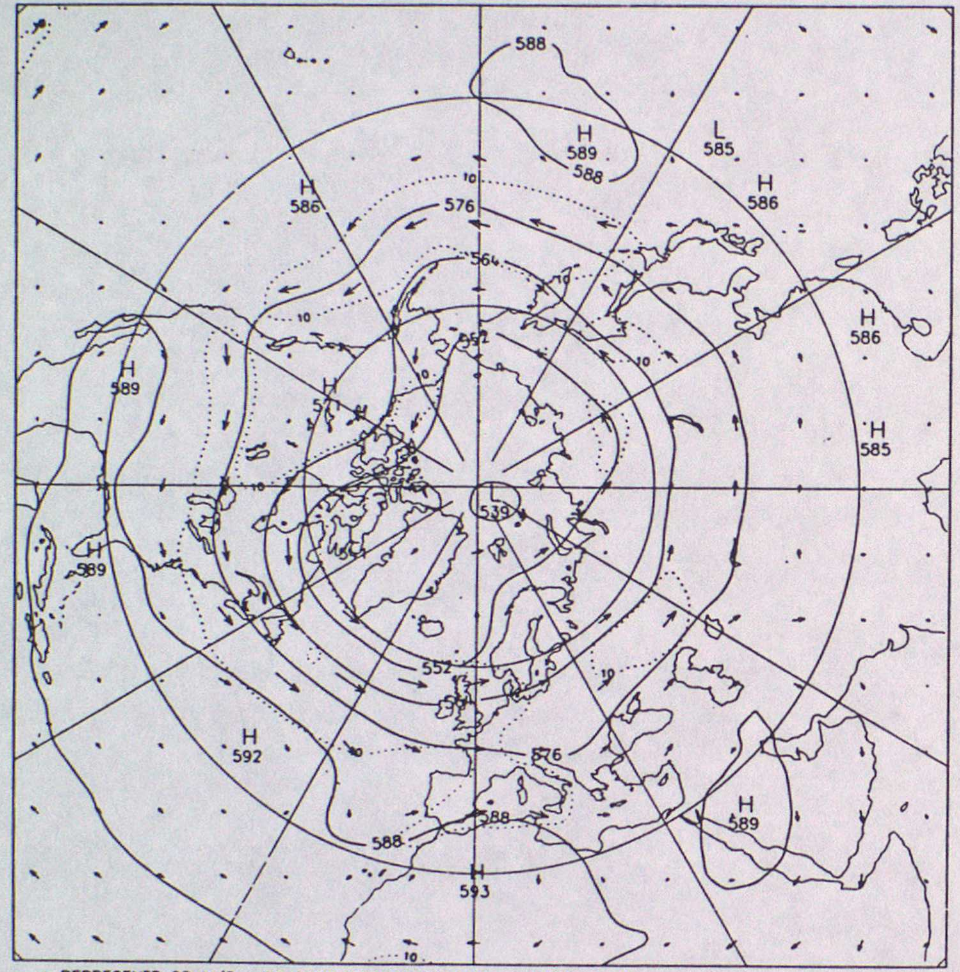
104
H
159
L
108
H
154
L
150
H
157
150
144
138
132
126
120
114
108
5
10
15

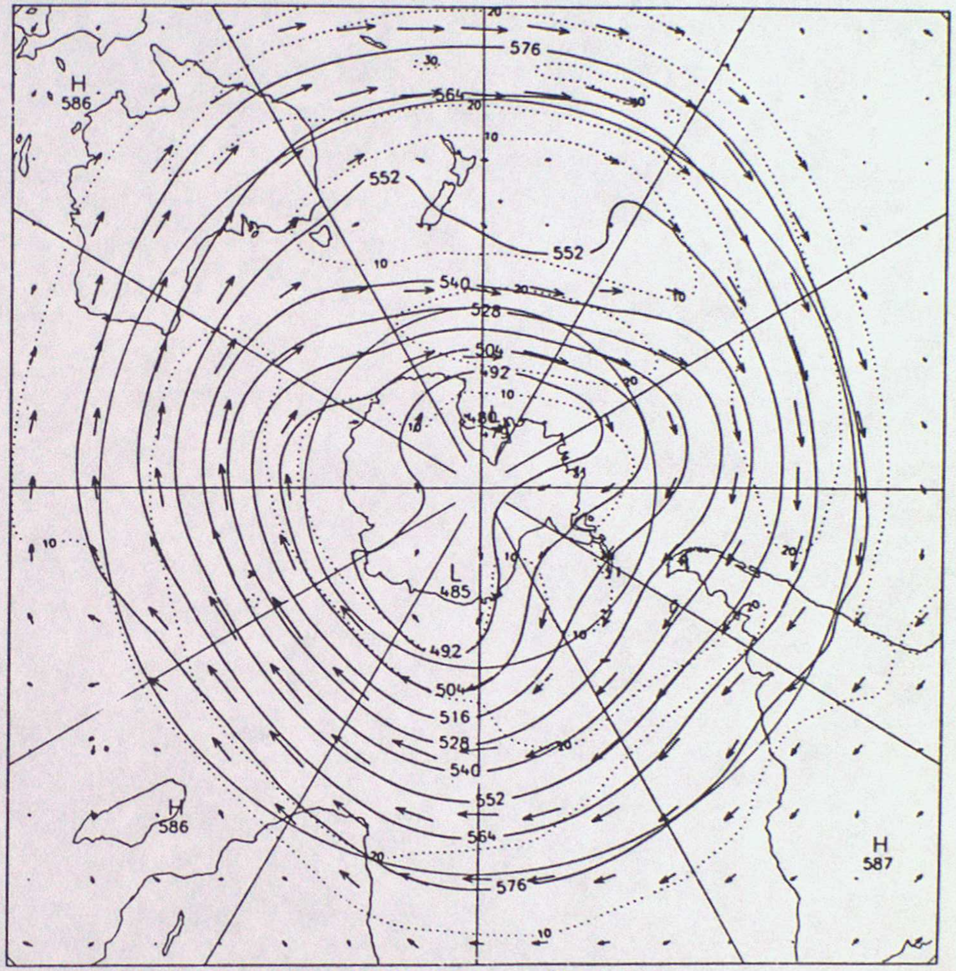
→ REPRESENTS 10 M/S     CONTOUR INTERVAL: 60 M     UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. AUGUST 1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/8/1989 DAY 213 TO 12Z ON 31/8/1989 DAY 243
LEVEL: 500 MB


588
H
589
588
L
585
H
586
H
586
10
576
564
552
10
H
586
H
589
H
57
H
585
539
10
H
589
552
10
H
592
576
588
588
H
589
H
593
10

→ REPRESENTS 20 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. AUGUST 1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/8/1989 DAY 213 TO 12Z ON 31/8/1989 DAY 243
LEVEL: 500 MB


20
576
30
H
586
564
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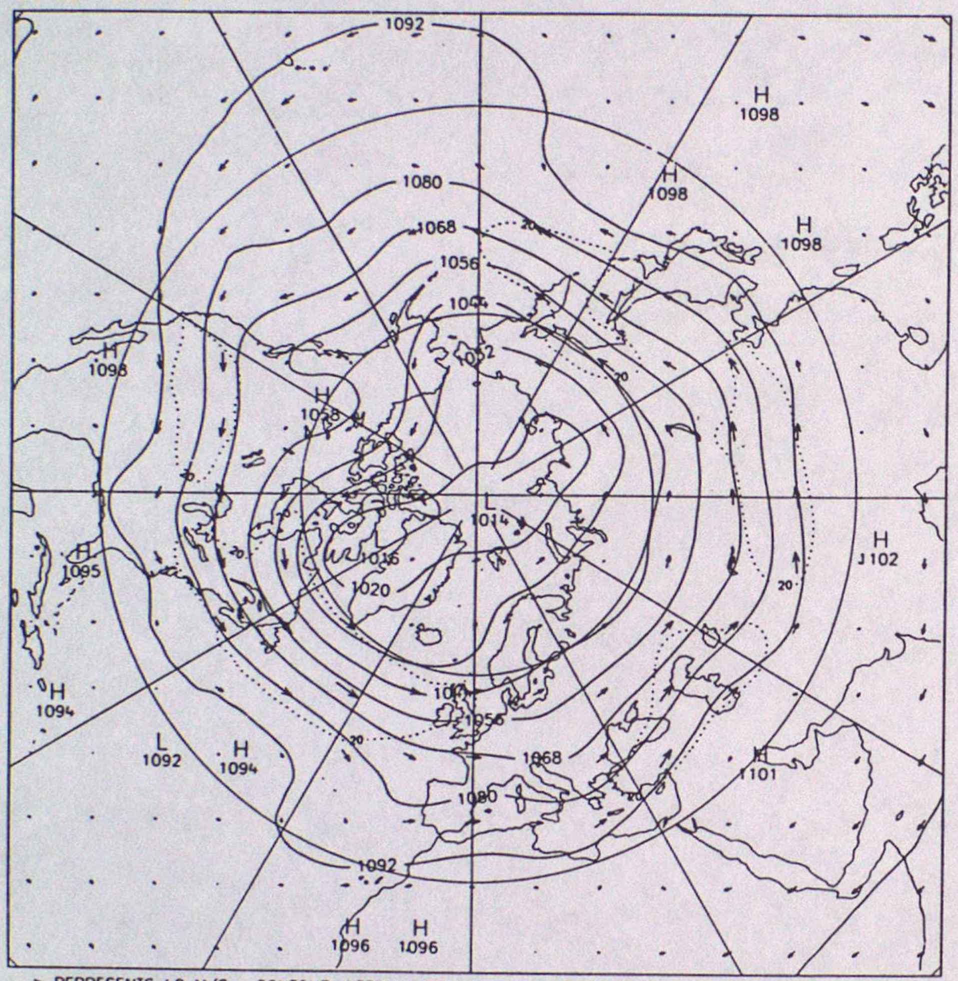
10
552
552
10
540
10
528
504
492
10
480
10
10
L
485
492
504
516
528
540
552
564
576
20
20
H
586
H
587
10

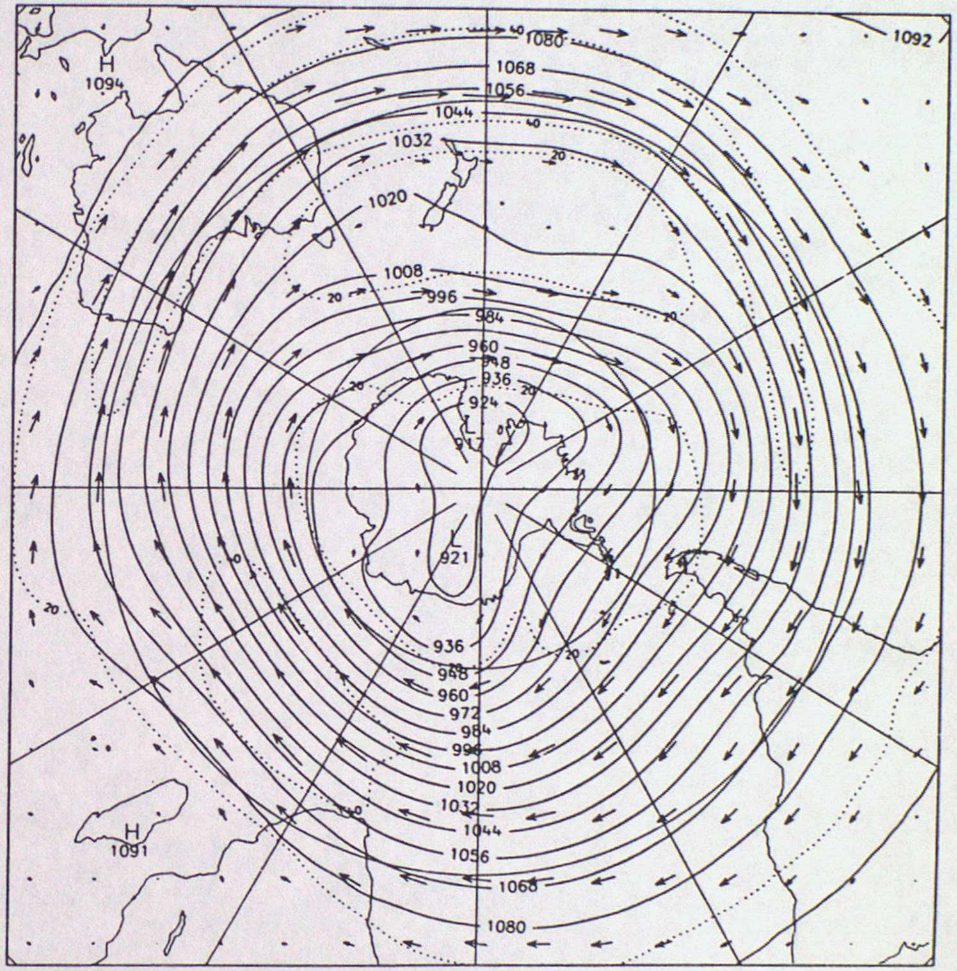
→ REPRESENTS 20 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS.    AUGUST    1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM  0Z ON 1/8/1989 DAY 213 TO 12Z ON 31/8/1989 DAY 243
LEVEL:  250 MB


1092
H 1098
H 1098
H 1098
1080
1068
1056
1044
1032
H 1098
H 1098
L 1014
1016
1020
H 1095
H 1102
H 1094
L 1092
H 1094
1044
1056
1068
H 1101
1080
1092
H 1096
H 1096
20

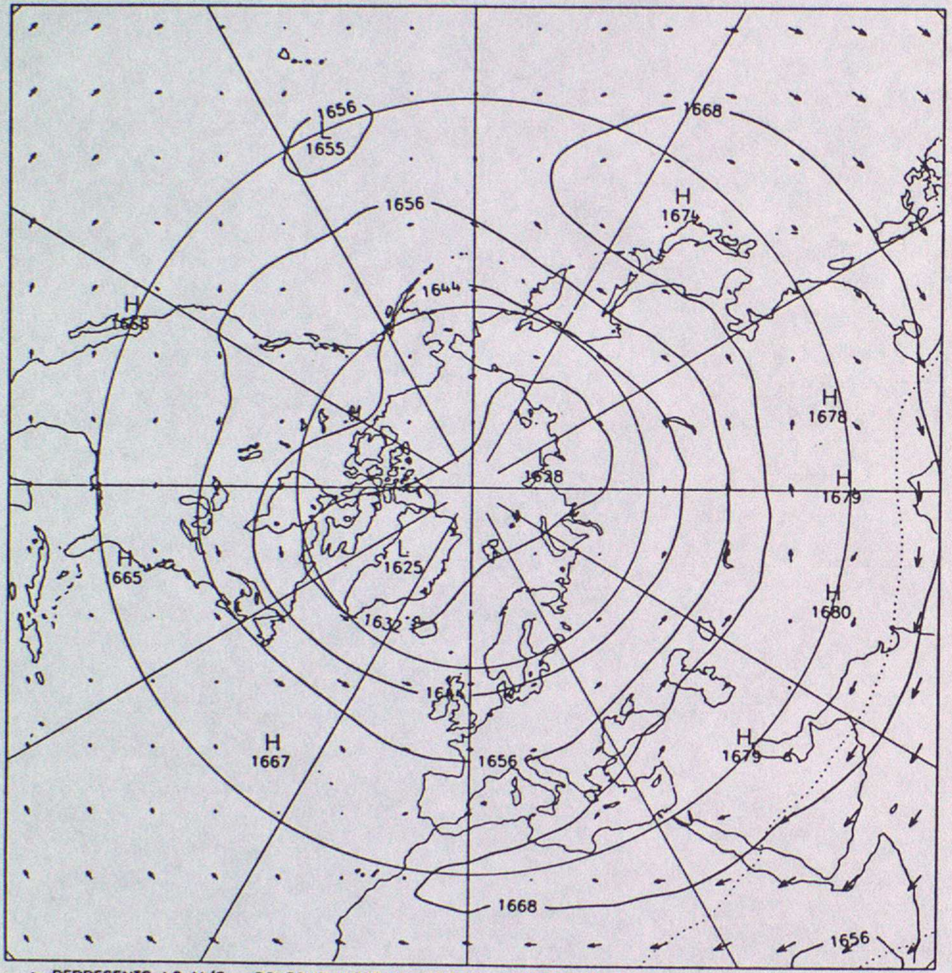
→ REPRESENTS 40 M/S    CONTOUR INTERVAL: 120 M    UNITS: 10 M

OPERATIONAL ARCHIVE MEANS.    AUGUST    1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM  0Z ON 1/8/1989 DAY 213 TO 12Z ON 31/8/1989 DAY 243
LEVEL:  250 MB


1080
1092
H 1094
1068
1056
1044
40
1032
20
1020
1008
996
984
960
948
936
924
L 912
L 921
936
948
960
972
984
996
1008
1020
1032
1044
1056
1068
1080
H 1091
20

→ REPRESENTS 40 M/S    CONTOUR INTERVAL: 120 M    UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. AUGUST 1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/8/1989 DAY 213 TO 12Z ON 31/8/1989 DAY 243
LEVEL: 100 MB


1656
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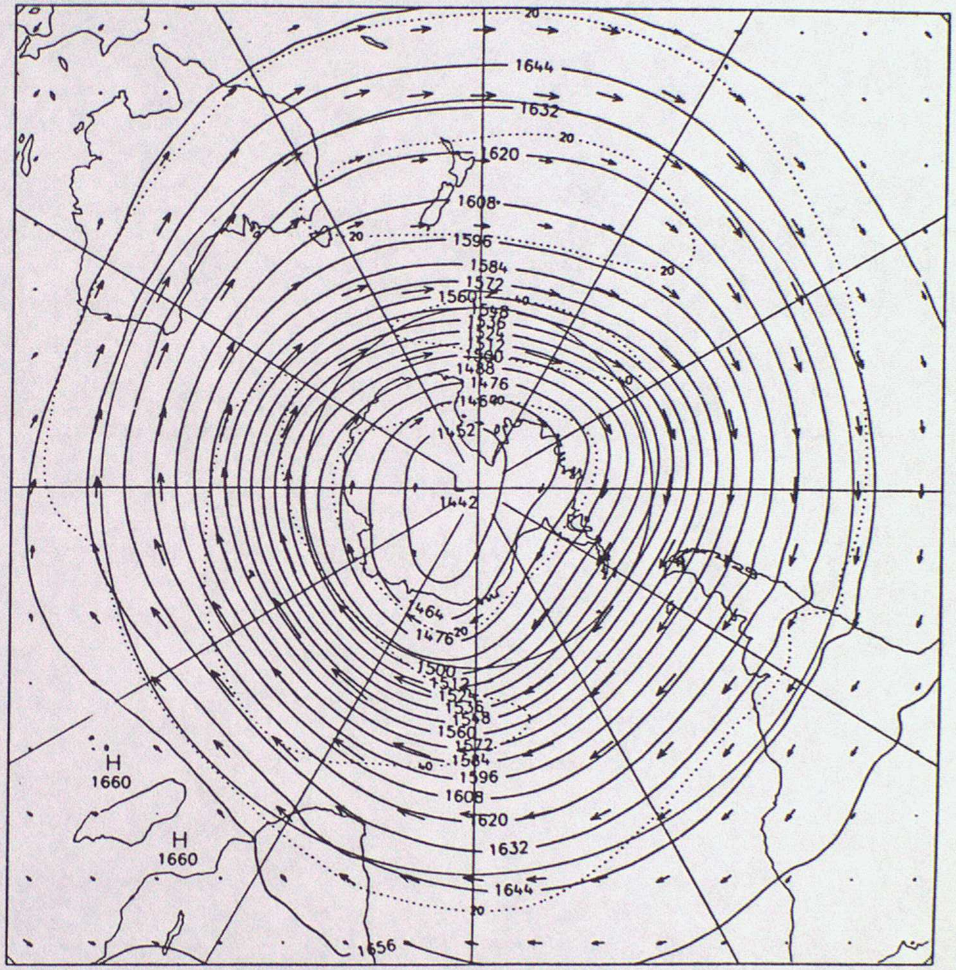
1658
H
1678
H
1679
1628
H
1665
L
1625
H
1680
1632
1644
H
1667
1656
H
1679
1668
1656

→ REPRESENTS 40 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. AUGUST 1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/8/1989 DAY 213 TO 12Z ON 31/8/1989 DAY 243
LEVEL: 100 MB


20
1644
1632
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1620
1608
1596
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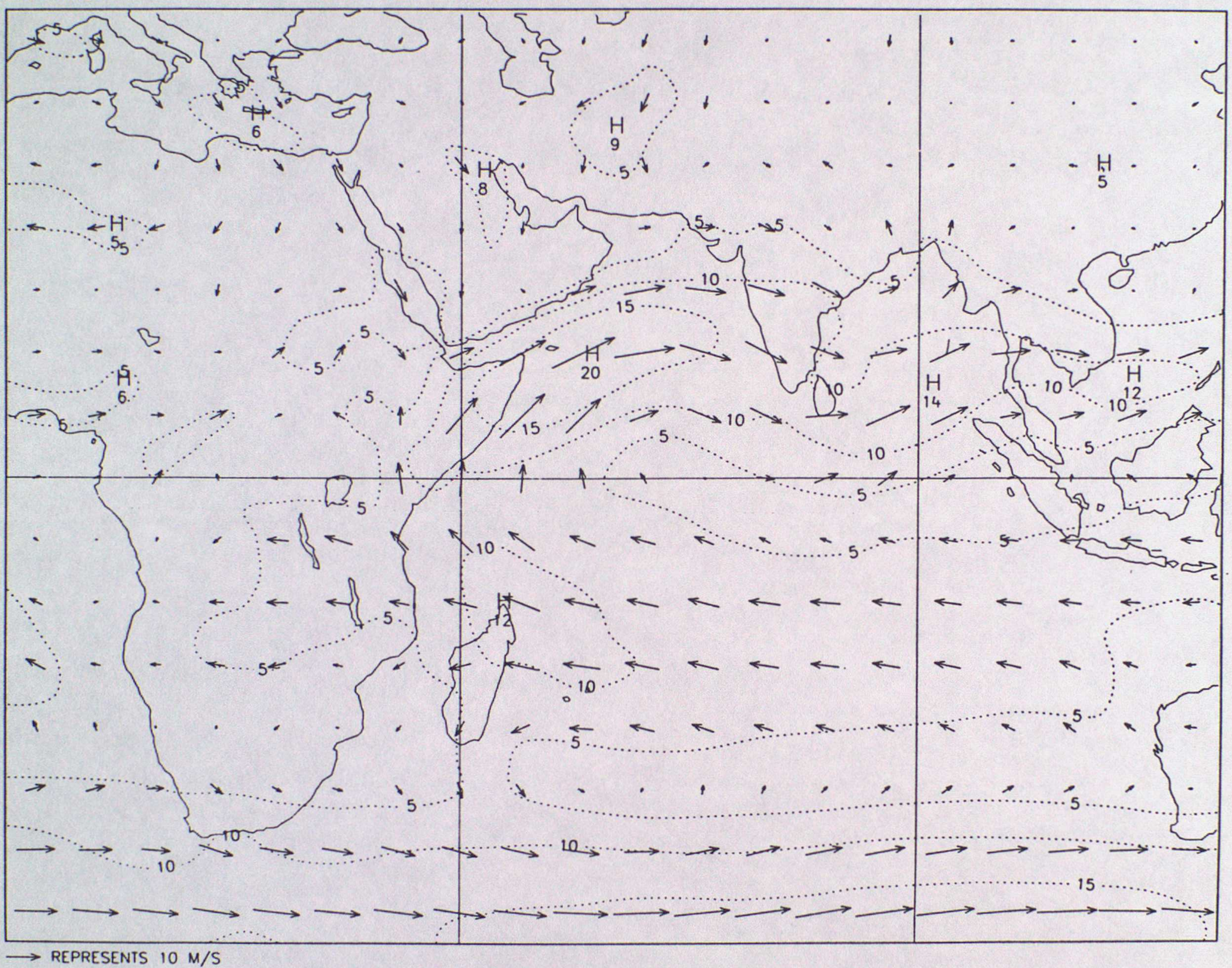
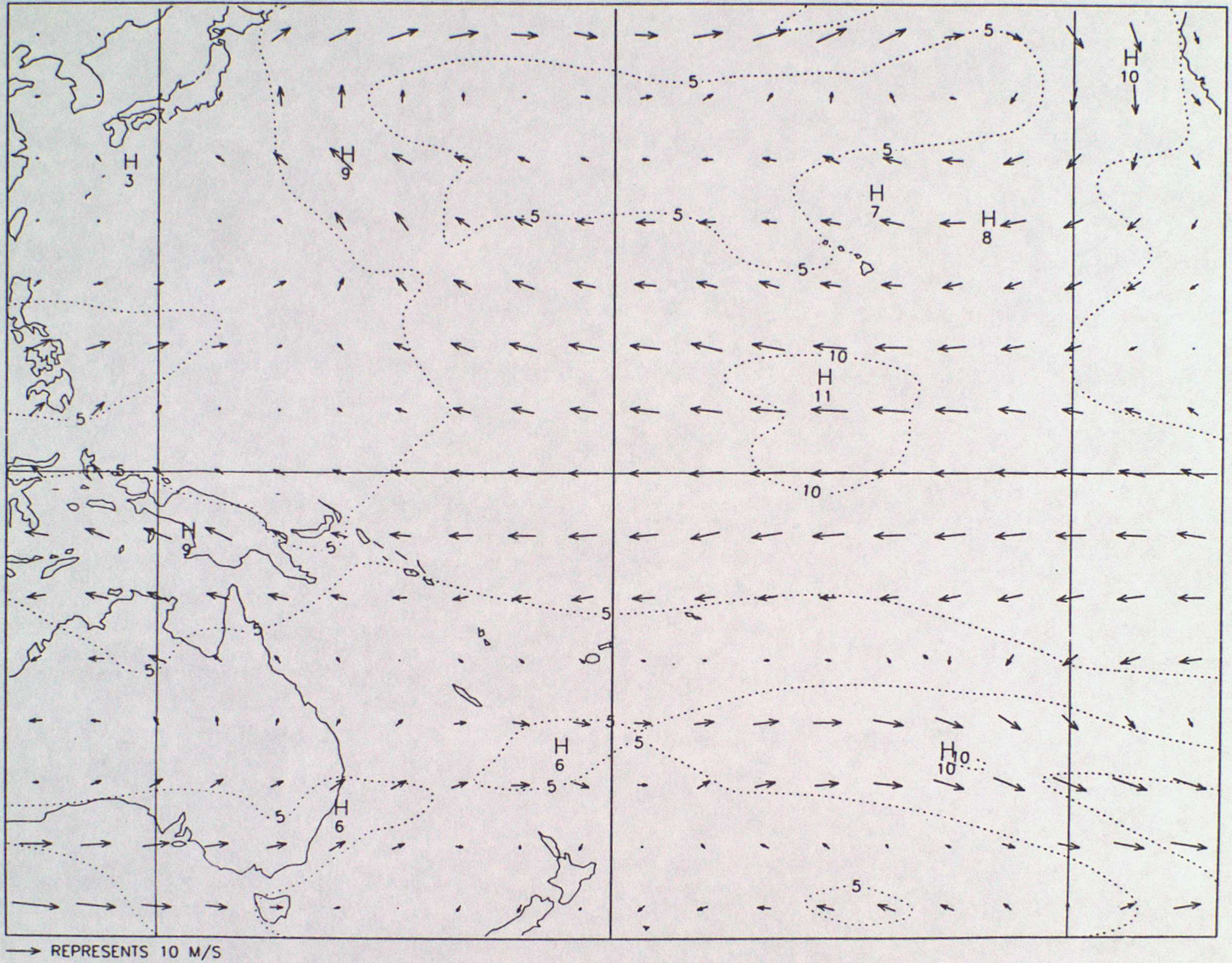
1584
1572
1560
1476
1452
1442
1464
1476
1500
1560
1572
1584
1596
1608
1620
1632
1644
20
H
1660
H
1660
1656

→ REPRESENTS 40 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

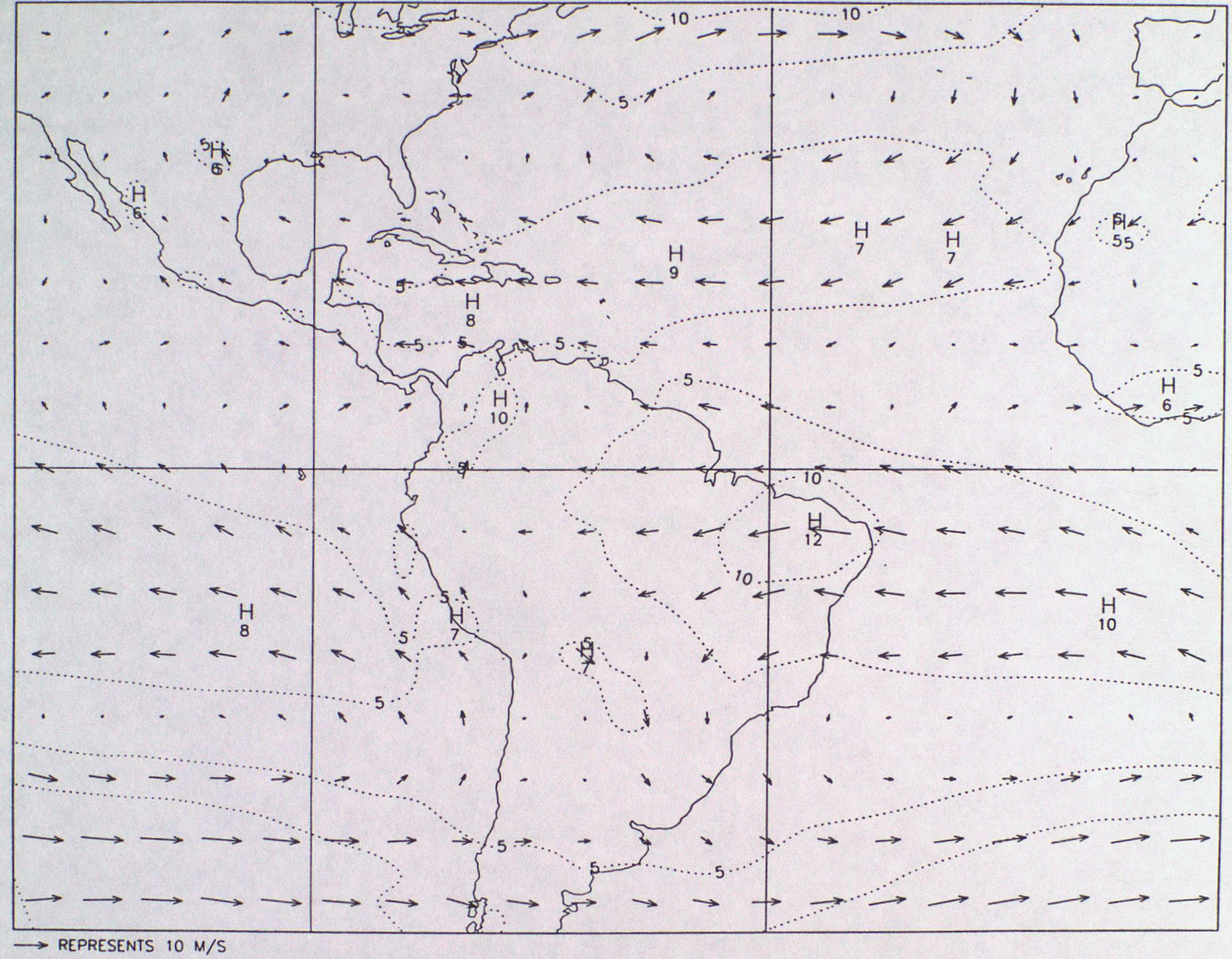
OPERATIONAL ARCHIVE MEANS. AUGUST 1989
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/8/1989 DAY 213 TO 12Z ON 31/8/1989 DAY 243
850 MBS. BETWEEN LONGS. 0 E - 120 E


H 6
H 9
H 8
H 5
H 5
H 20
H 6
H 14
H 12
H 12
5
10
15
→ REPRESENTS 10 M/S

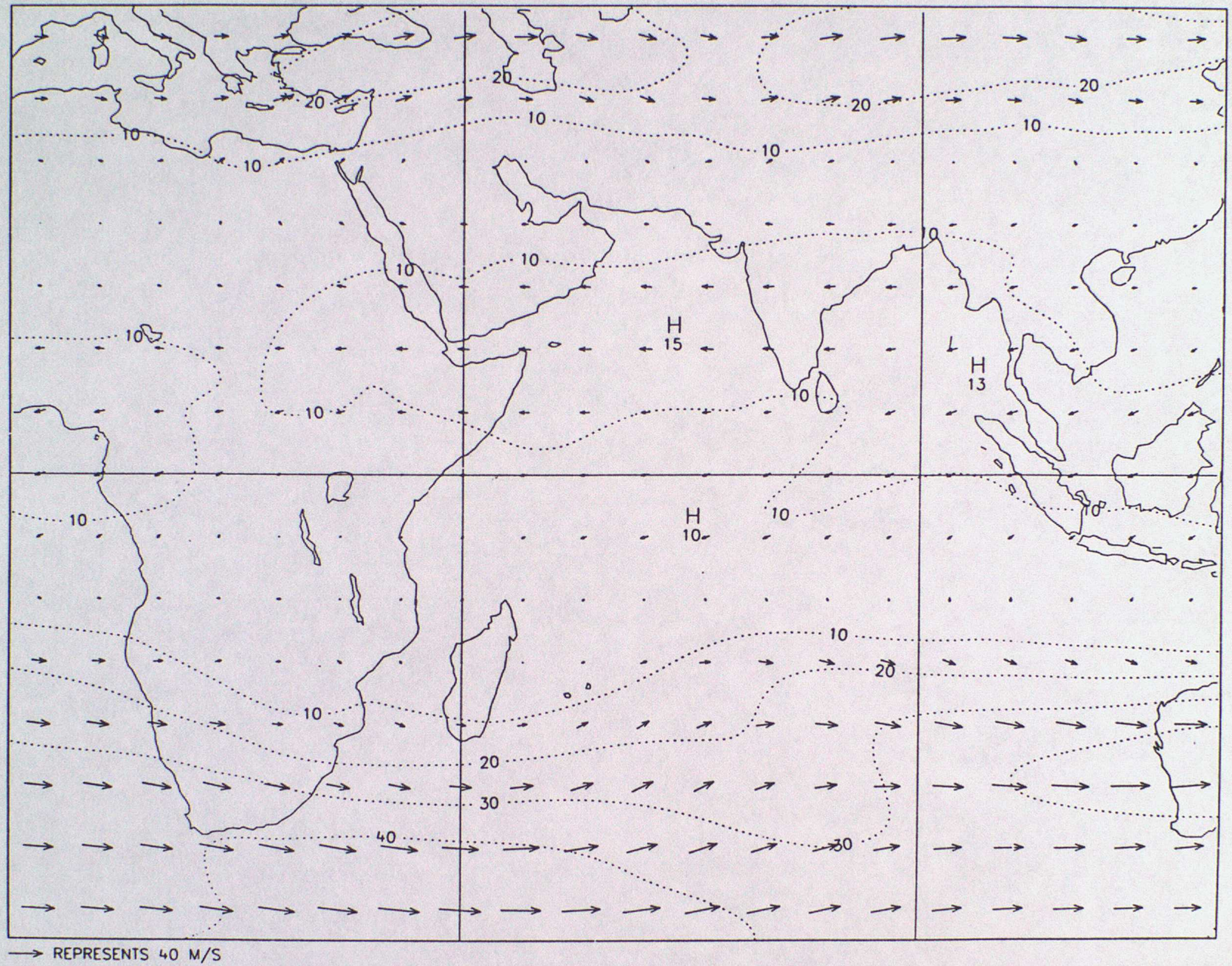
OPERATIONAL ARCHIVE MEANS. AUGUST 1989
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/8/1989 DAY 213 TO 12Z ON 31/8/1989 DAY 243
850 MBS. BETWEEN LONGS. 120 E - 120 W


H 10
H 3
H 9
H 7
H 8
H 11
H 9
H 6
H 6
H 10
5
10
→ REPRESENTS 10 M/S

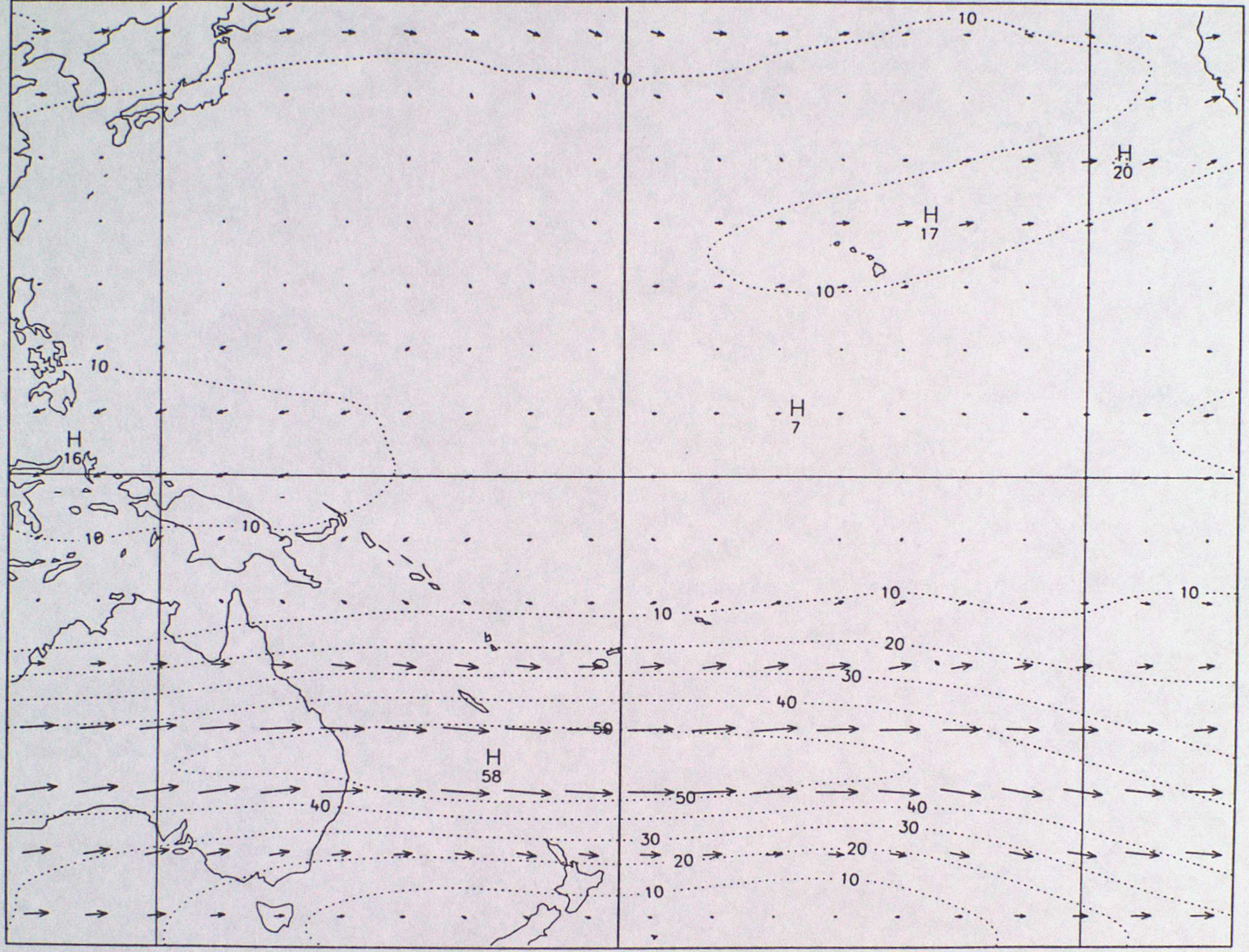
OPERATIONAL ARCHIVE MEANS. AUGUST 1989
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/8/1989 DAY 213 TO 12Z ON 31/8/1989 DAY 243
850 MBS. BETWEEN LONGS. 120 W - 0 W


10
10
5
H 6
H 6
H 9
H 7
H 7
H 5
H 8
5
H 10
H 6
H 12
10
H 8
H 7
H 10
5
→ REPRESENTS 10 M/S

OPERATIONAL ARCHIVE MEANS.     AUGUST     1989
WIND ARROWS AND ISOTACHS   BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM   0Z ON 1/8/1989 DAY 213 TO 12Z ON 31/8/1989 DAY 243
250 MBS.                    BETWEEN LONGS. 0 E - 120 E


20
10
H
15
H
13
L
H
10
30
40
→ REPRESENTS 40 M/S

OPERATIONAL ARCHIVE MEANS. AUGUST 1989
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/8/1989 DAY 213 TO 12Z ON 31/8/1989 DAY 243
250 MBS. BETWEEN LONGS. 120 E - 120 W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10
10
H
20
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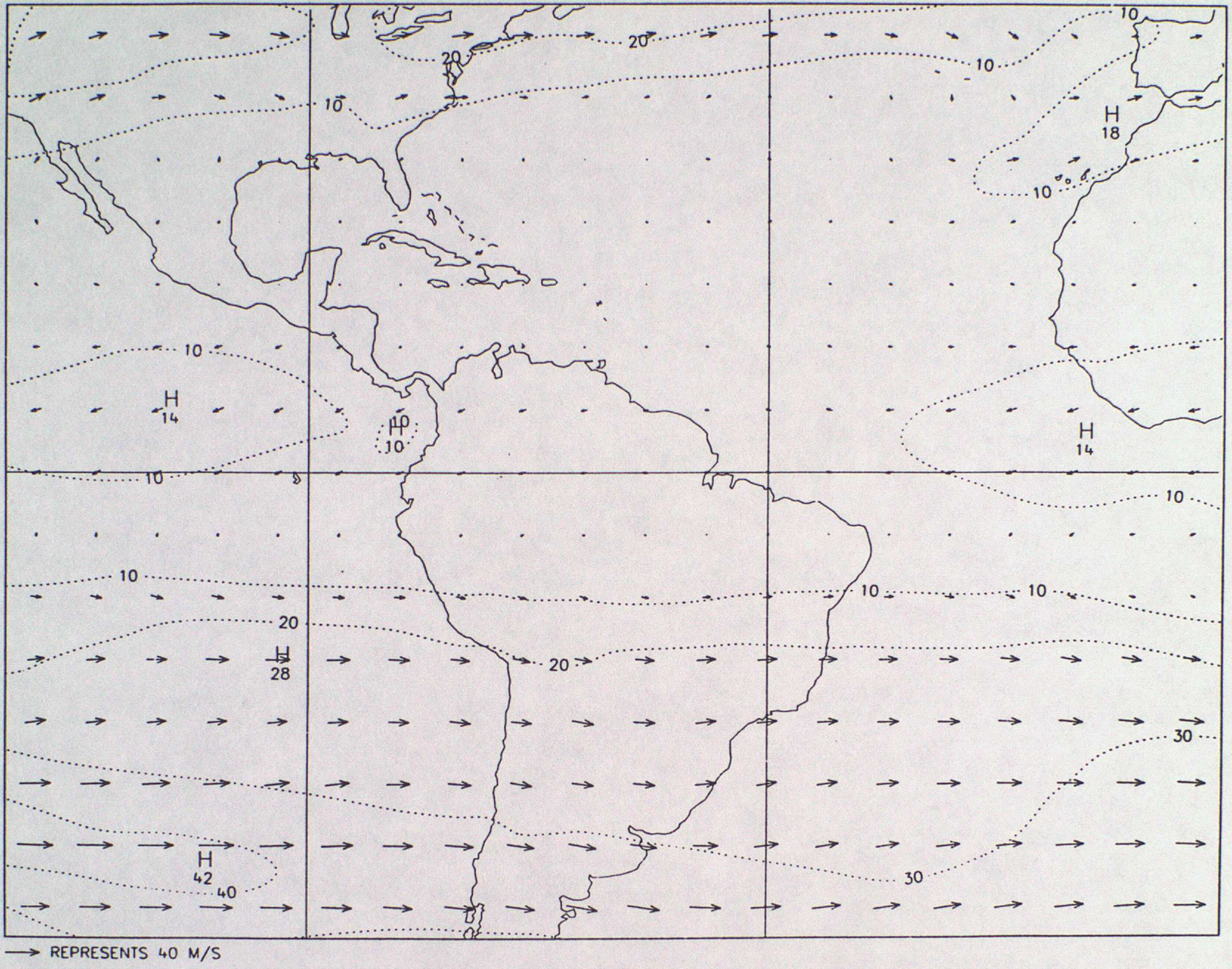
10
10
H
16
H
7
10
10
10
10
10
20
30
40
50
H
58
40
50
40
30
30
20
20
10
10

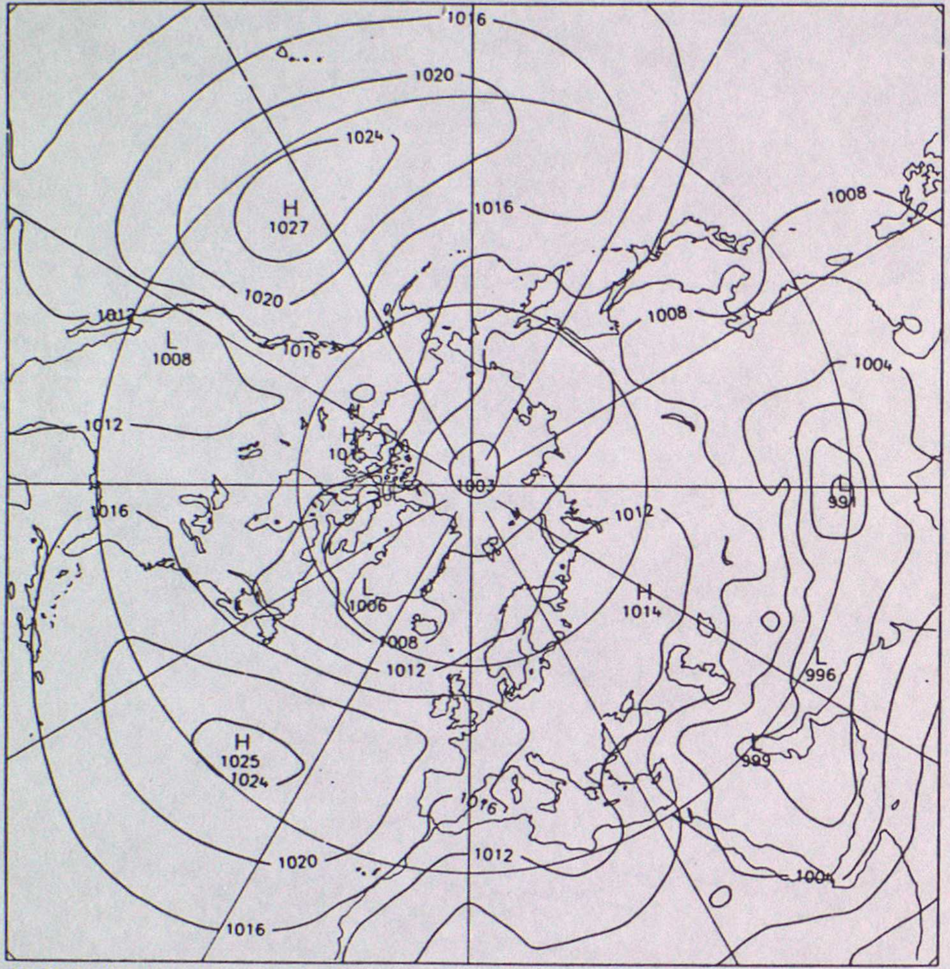
→ REPRESENTS 40 M/S

OPERATIONAL ARCHIVE MEANS.    AUGUST    1989
WIND ARROWS AND ISOTACHS  BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM  0Z ON 1/8/1989 DAY 213 TO 12Z ON 31/8/1989 DAY 243
250 MBS.    BETWEEN LONGS. 120 W - 0 W


10
20
20
10
10
H
18
10
10
H
14
H
10
10
H
14
10
10
10
10
20
H
28
20
30
H
42
40
30
→ REPRESENTS 40 M/S

# JUNE/JULY/AUGUST
# 1989

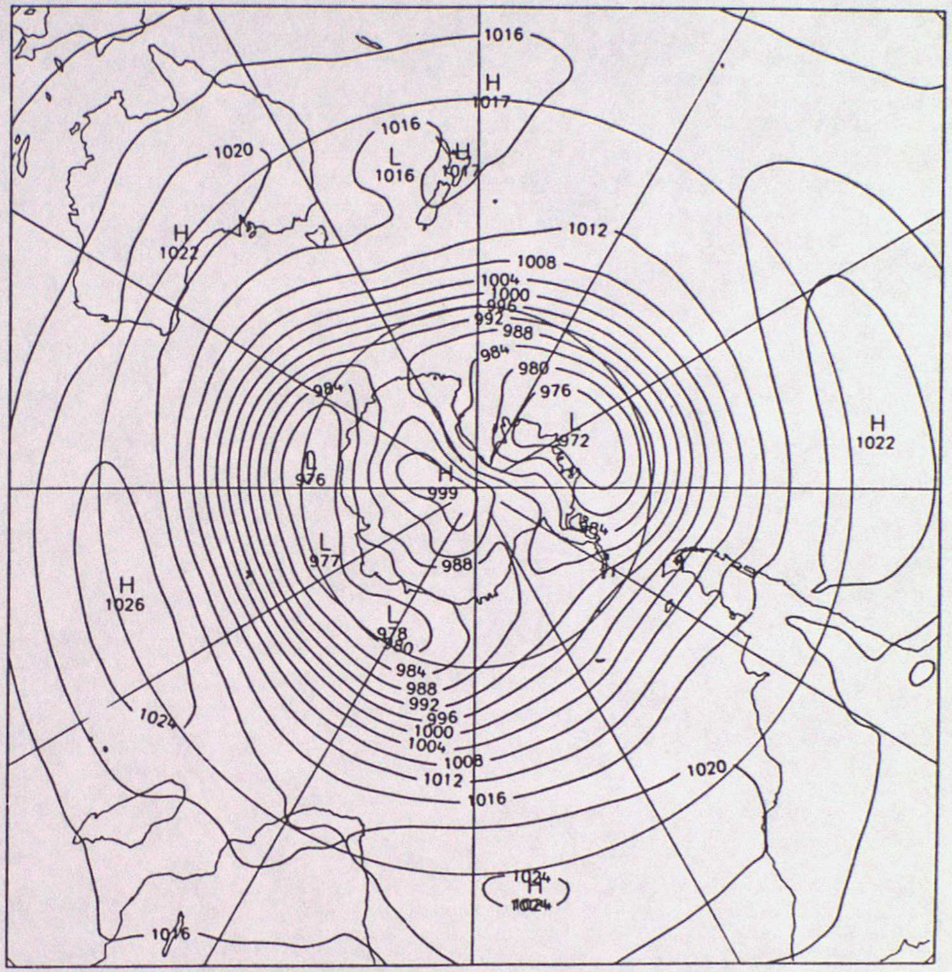
OPERATIONAL ARCHIVE MEANS. JUN/JUL/AUG1989
PMSL
AVERAGE FROM 0Z ON 1/6/1989 DAY 152 TO 12Z ON 31/8/1989 DAY 243
SEA LEVEL



1016
1020
1024
H 1027
1016
1020
1012
L 1008
1016
1008
1008
1004
1012
H 1003
1012
H 1014
L 991
L 1006
1008
1012
L 996
H 1025
1024
999
1016
1020
1012
1004
1016

CONTOUR INTERVAL: 4 MB UNITS: MB

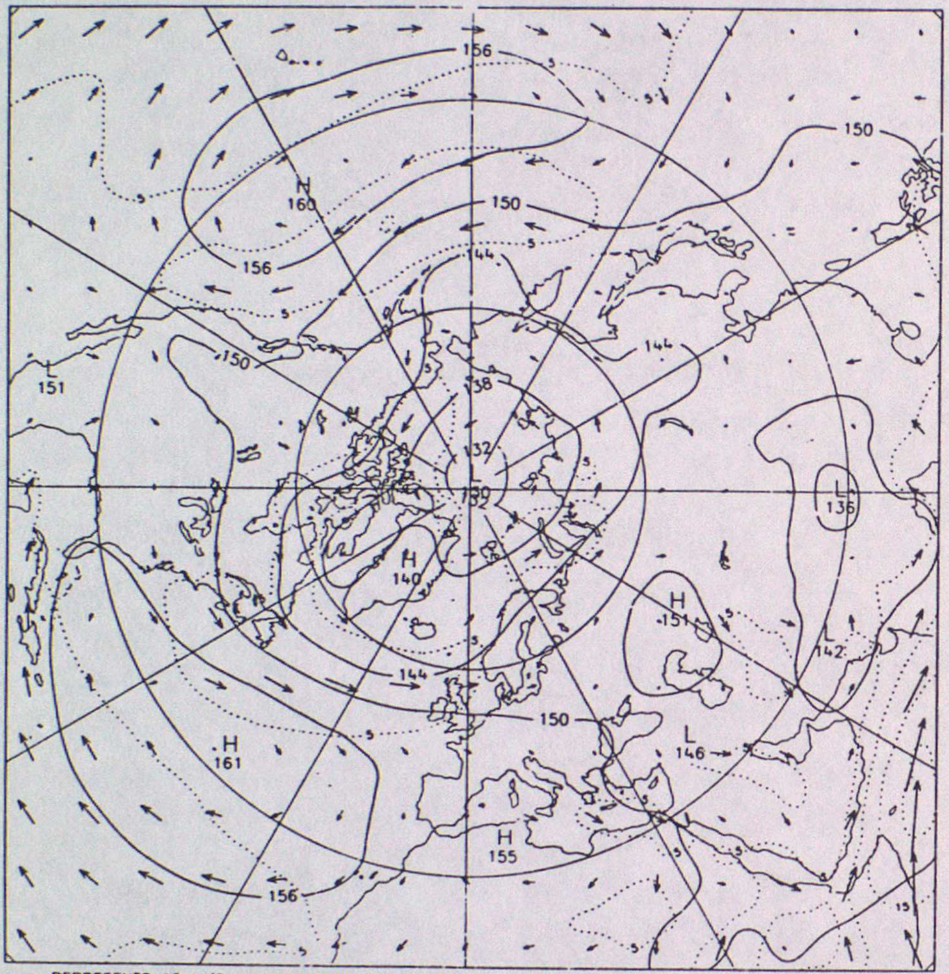
OPERATIONAL ARCHIVE MEANS. JUN/JUL/AUG1989
PMSL
AVERAGE FROM 0Z ON 1/6/1989 DAY 152 TO 12Z ON 31/8/1989 DAY 243
SEA LEVEL



1016
H 1017
1016
L 1016
H 1017
1020
H 1022
1012
1008
1004
1000
996
992
988
984
980
976
L 972
H 1022
L 976
H 999
984
L 977
988
H 1026
L 978
980
984
988
992
996
1000
1004
1008
1012
1016
1024
1020
1024
H 1024
1016

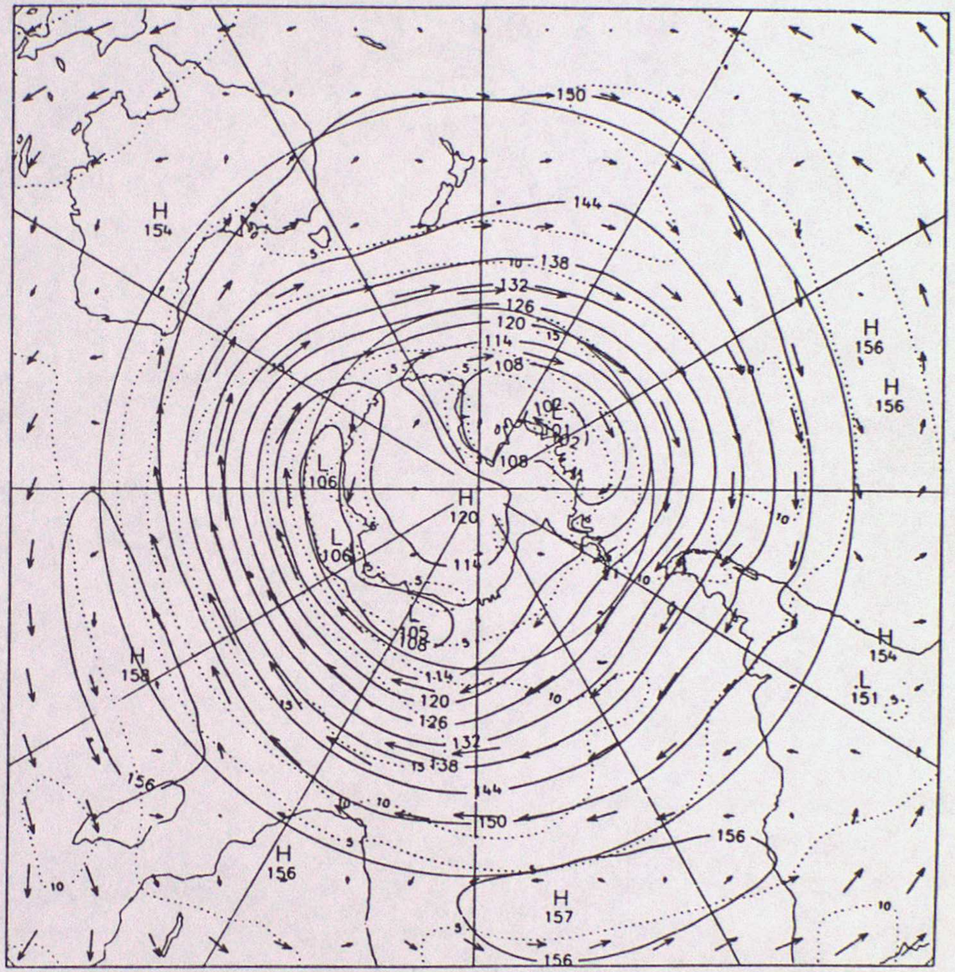
CONTOUR INTERVAL: 4 MB UNITS: MB

OPERATIONAL ARCHIVE MEANS.    JUN/JUL/AUG1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM  0Z ON 1/6/1989 DAY 152 TO 12Z ON 31/8/1989 DAY 243
LEVEL:  850 MB


156
150
H
160
156
150
144
L
151
150
138
132
130
H
140
144
150
H
161
H
155
156
L
136
H
151
L
142
L
146
5
10
15

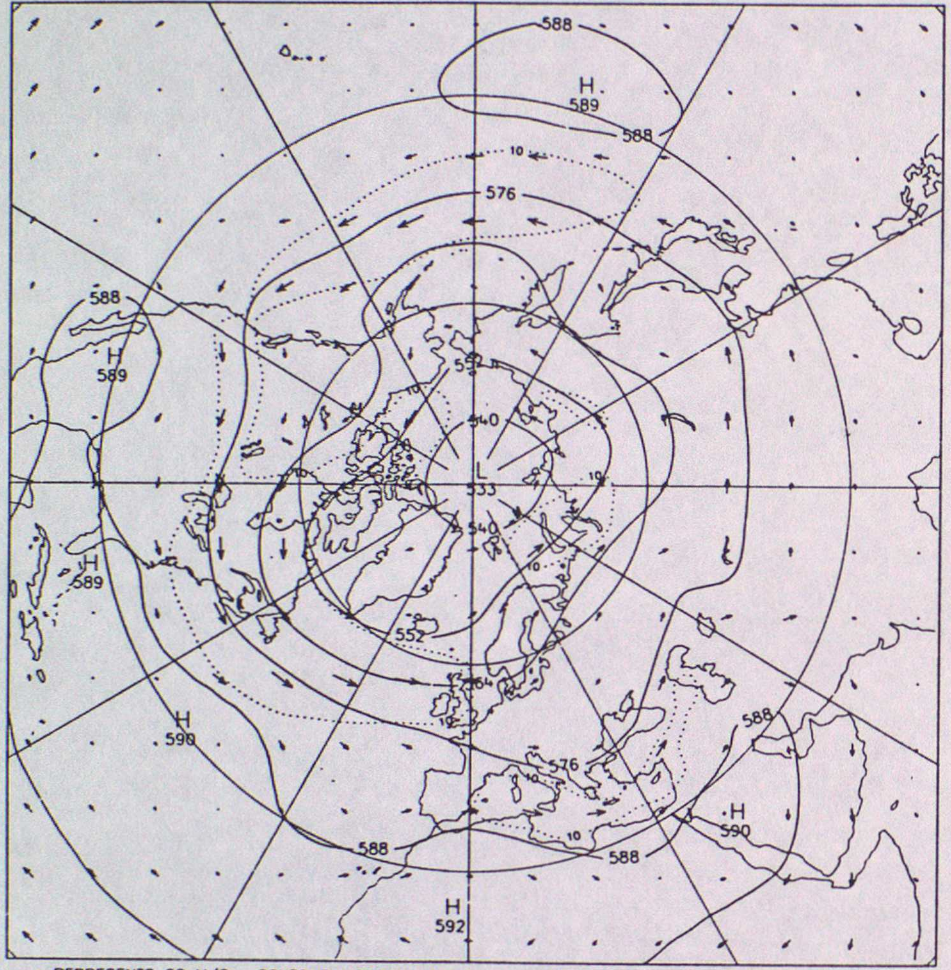
→ REPRESENTS 10 M/S    CONTOUR INTERVAL: 60 M    UNITS: 10 M

OPERATIONAL ARCHIVE MEANS.    JUN/JUL/AUG1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM  0Z ON 1/6/1989 DAY 152 TO 12Z ON 31/8/1989 DAY 243
LEVEL:  850 MB


150
H
154
144
138
132
126
120
114
108
102
H
156
H
156
L
106
L
106
H
120
L
105
108
H
158
H
154
L
151
156
H
156
H
157
156
5
10
15

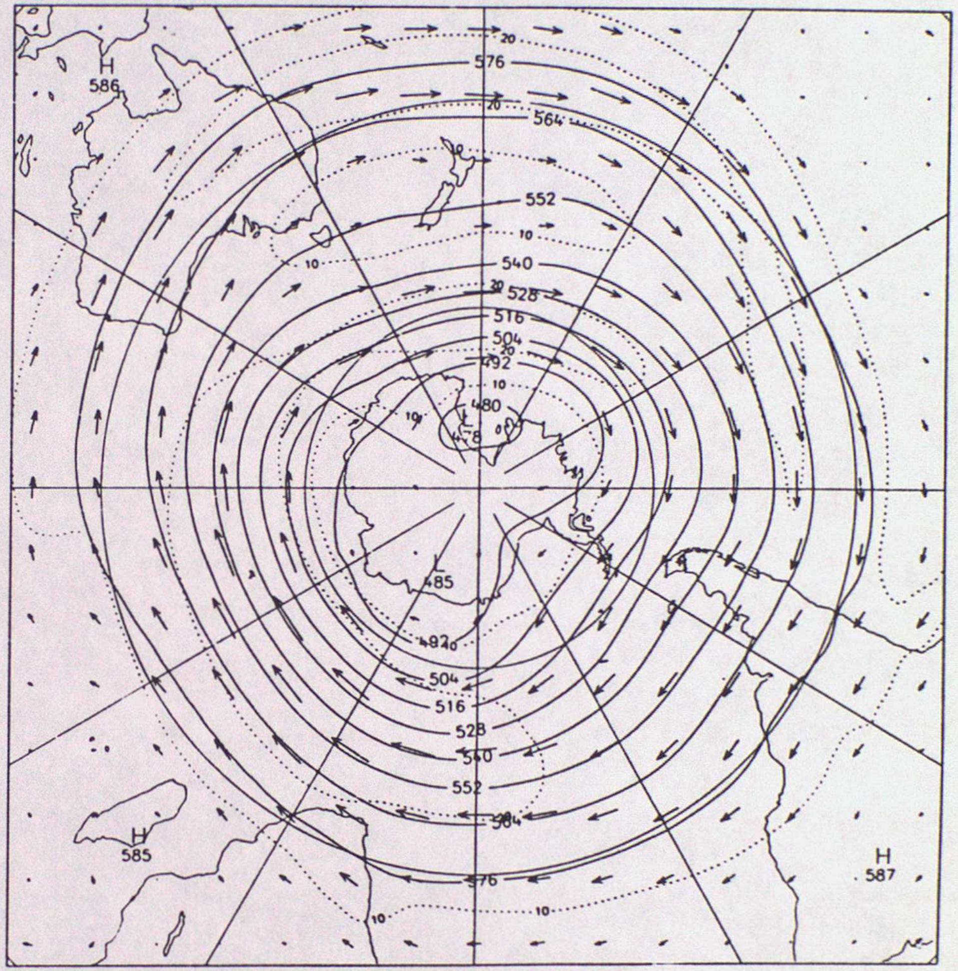
→ REPRESENTS 10 M/S    CONTOUR INTERVAL: 60 M    UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. JUN/JUL/AUG1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/6/1989 DAY 152 TO 12Z ON 31/8/1989 DAY 243
LEVEL: 500 MB


588
H.
589
588
10
576
588
H
589
552
10
540
L
533
540
10
H
589
552
564
H
590
576
588
H
590
10
588
588
H
592

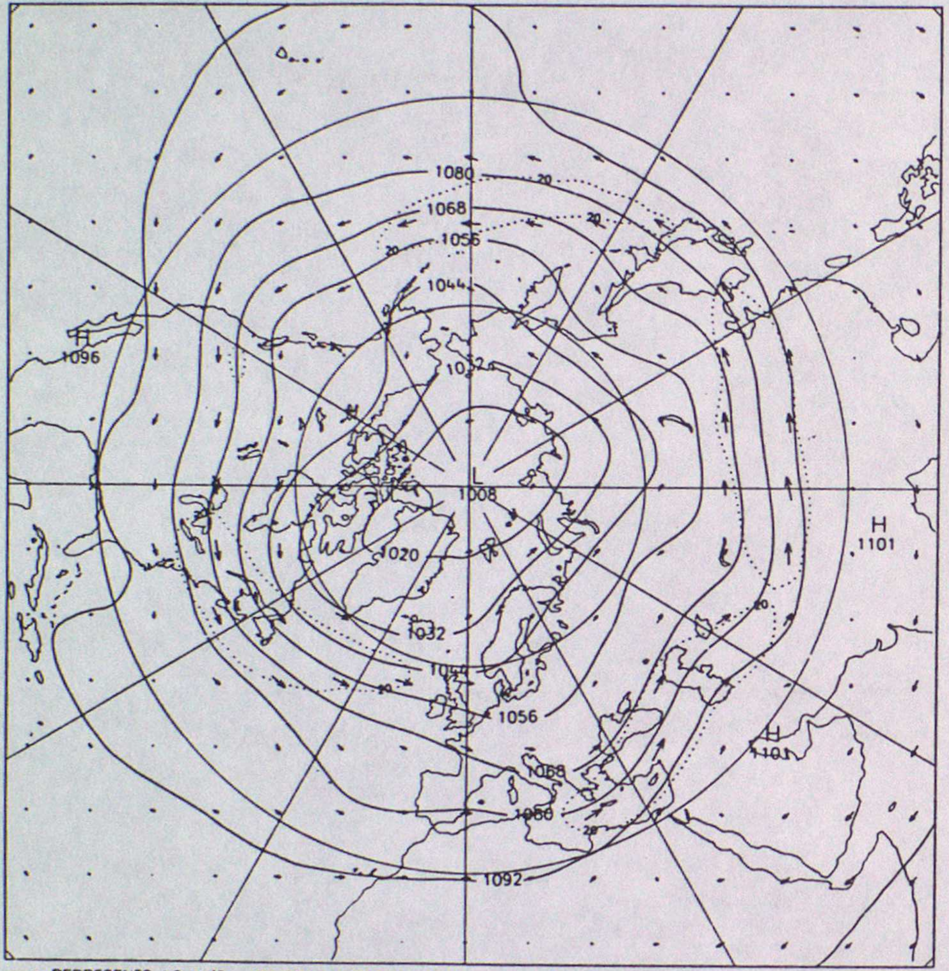
→ REPRESENTS 20 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. JUN/JUL/AUG1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/6/1989 DAY 152 TO 12Z ON 31/8/1989 DAY 243
LEVEL: 500 MB


H
586
20
576
20
564
10
552
10
10
540
528
516
504
492
10
480
L
478
10
L
485
492
504
516
528
540
552
564
H
585
576
10
10
H
587

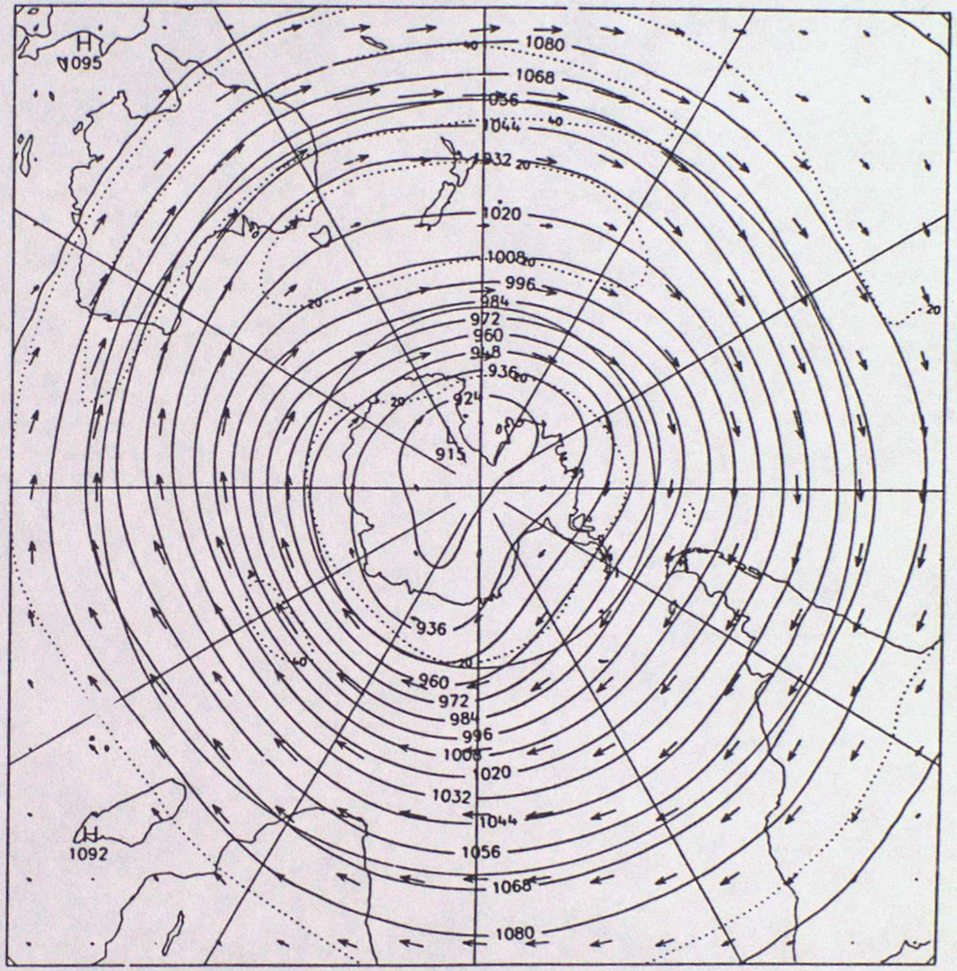
→ REPRESENTS 20 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. JUN/JUL/AUG1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/6/1989 DAY 152 TO 12Z ON 31/8/1989 DAY 243
LEVEL: 250 MB


1080
1068
1056
1044
1032
1020
1008
L
H
1096
H
1101
1032
1044
1056
1068
1080
1092
H
1101
20

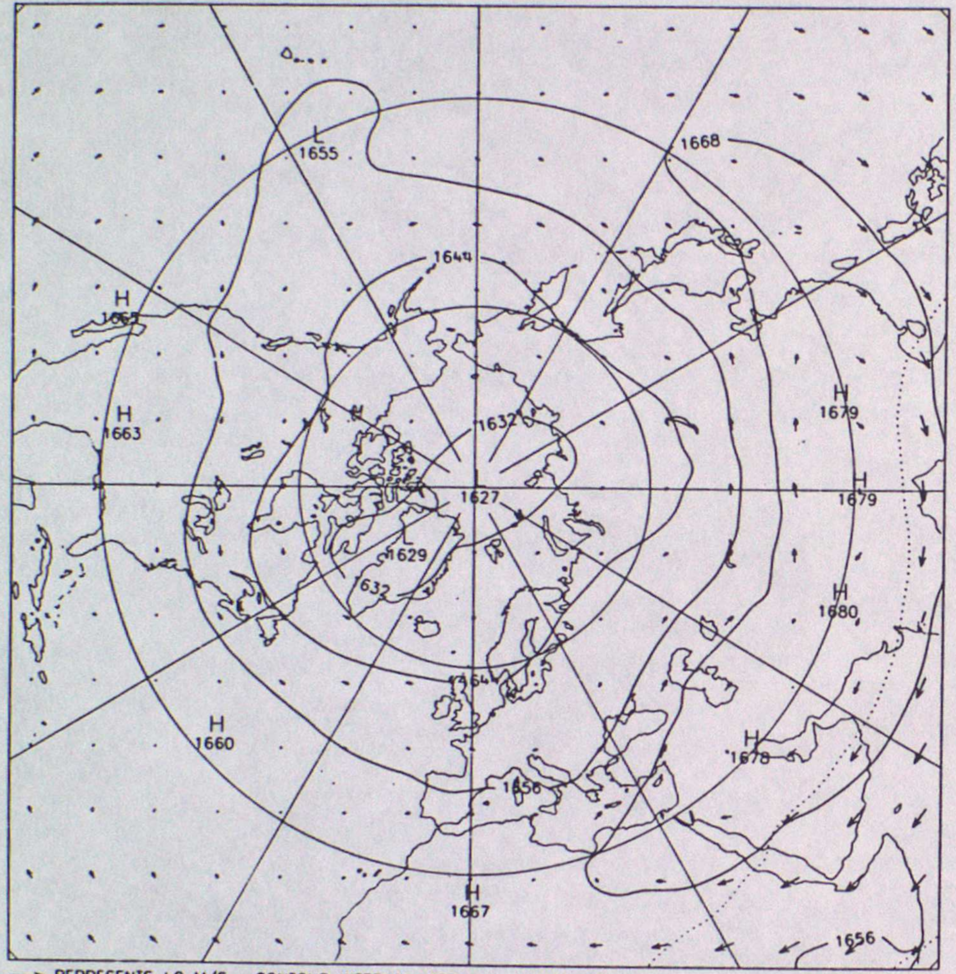
→ REPRESENTS 40 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. JUN/JUL/AUG1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM 0Z ON 1/6/1989 DAY 152 TO 12Z ON 31/8/1989 DAY 243
LEVEL: 250 MB


H
1095
1080
1068
1056
1044
1032
1020
1008
996
984
972
960
948
936
924
L
915
936
960
972
984
996
1008
1020
1032
1044
1056
1068
1080
H
1092
20
40

→ REPRESENTS 40 M/S CONTOUR INTERVAL: 120 M UNITS: 10 M

OPERATIONAL ARCHIVE MEANS.     JUN/JUL/AUG1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM  0Z ON 1/6/1989 DAY 152 TO 12Z ON 31/8/1989 DAY 243
LEVEL:  100 MB


L
1655
1668
1644
H
1665
H
1663
1632
1627
1629
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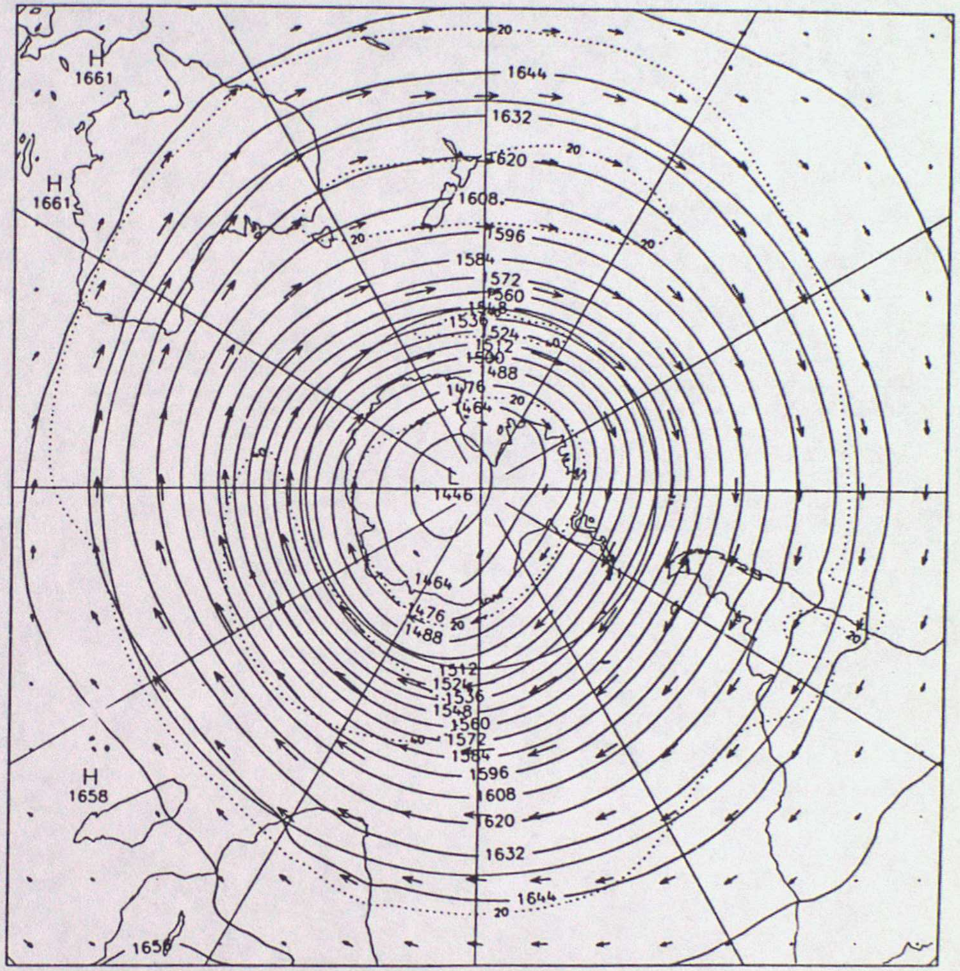
1644
H
1660
1656
H
1667
H
1679
H
1679
H
1680
H
1678
1656

→ REPRESENTS 40 M/S   CONTOUR INTERVAL: 120 M   UNITS: 10 M

OPERATIONAL ARCHIVE MEANS.     JUN/JUL/AUG1989
HEIGHTS, WIND ARROWS AND ISOTACHS.
AVERAGE FROM  0Z ON 1/6/1989 DAY 152 TO 12Z ON 31/8/1989 DAY 243
LEVEL:  100 MB


H
1661
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1661
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1644
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1620
1608
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1584
1572
1560
1548
1536
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1488
1476
1464
L
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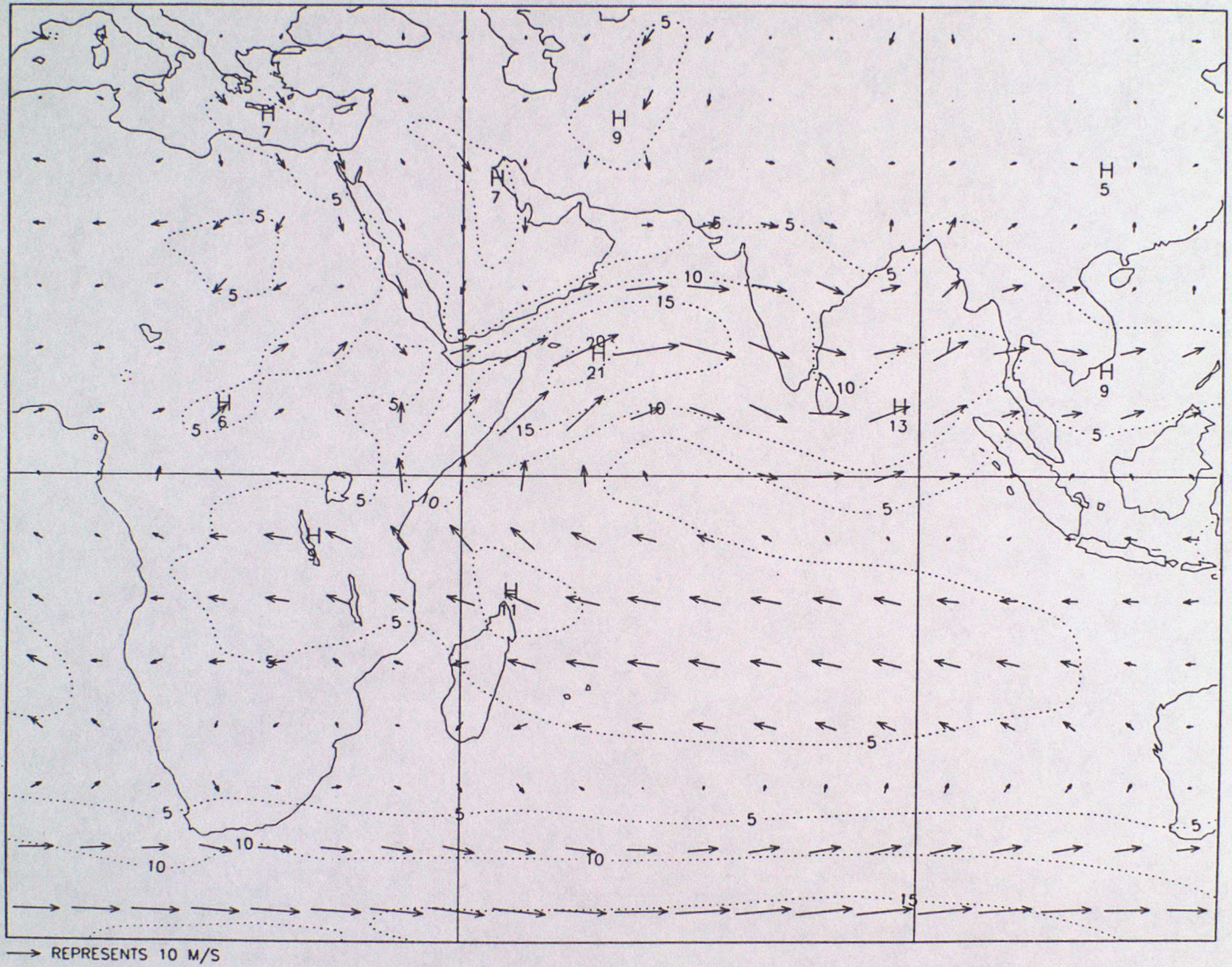
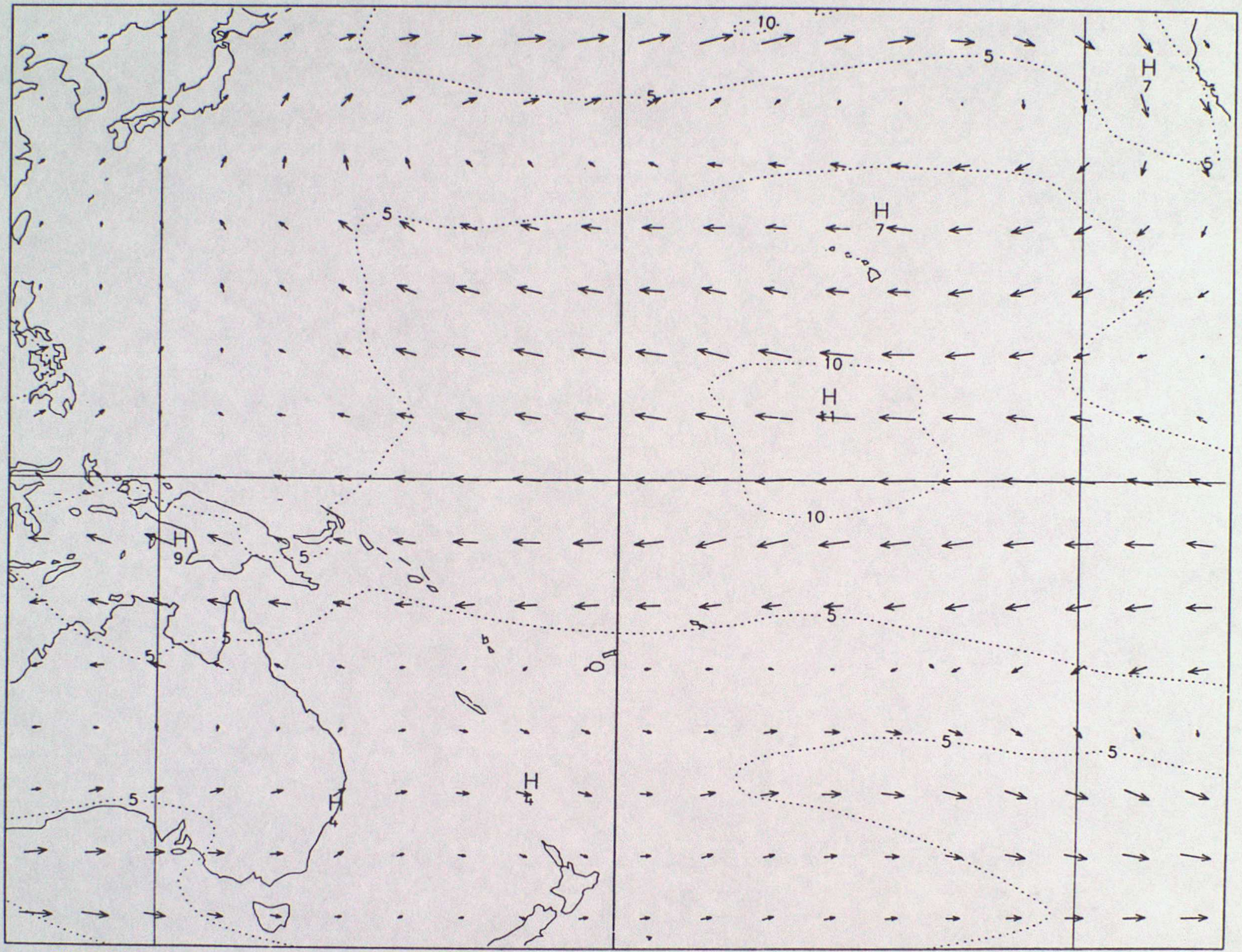
1464
1476
1488
1512
1524
1536
1548
1560
1572
1584
1596
1608
1620
1632
1644
20
H
1658
1658

→ REPRESENTS 40 M/S   CONTOUR INTERVAL: 120 M   UNITS: 10 M

OPERATIONAL ARCHIVE MEANS. JUN/JUL/AUG1989
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/6/1989 DAY 152 TO 12Z ON 31/8/1989 DAY 243
850 MBS. BETWEEN LONGS. 0 E - 120 E

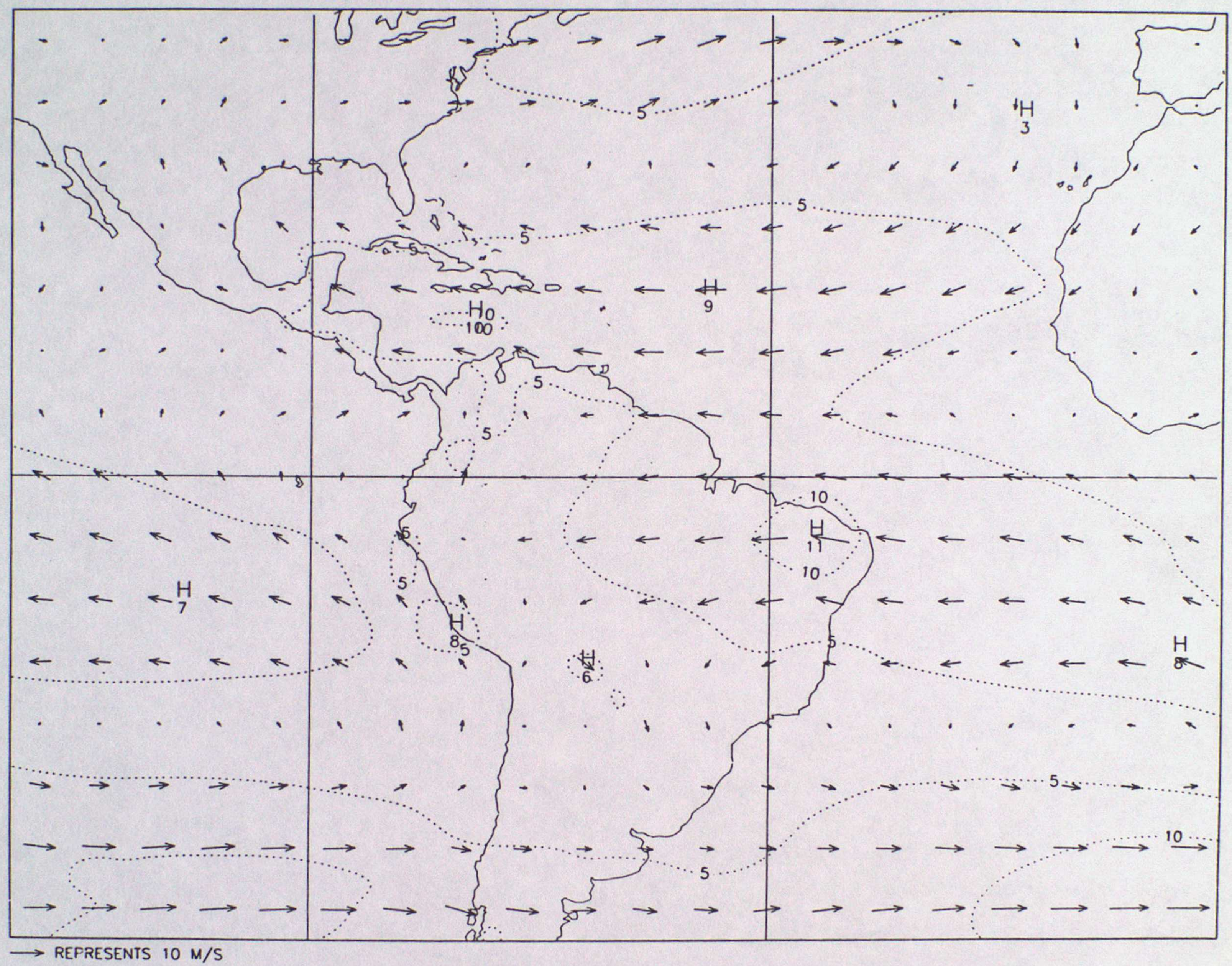

H 7
H 9
H 7
H 5
H 6
H 21
20
H 13
H 9
H 9
H 11
5
10
15
→ REPRESENTS 10 M/S

OPERATIONAL ARCHIVE MEANS. JUN/JUL/AUG1989
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/6/1989 DAY 152 TO 12Z ON 31/8/1989 DAY 243
850 MBS. BETWEEN LONGS. 120 E - 120 W


10
5
5
H
7
5
5
H
7
10
H
11
10
H
9
5
5
5
5
5
5
5
H
4
H
4

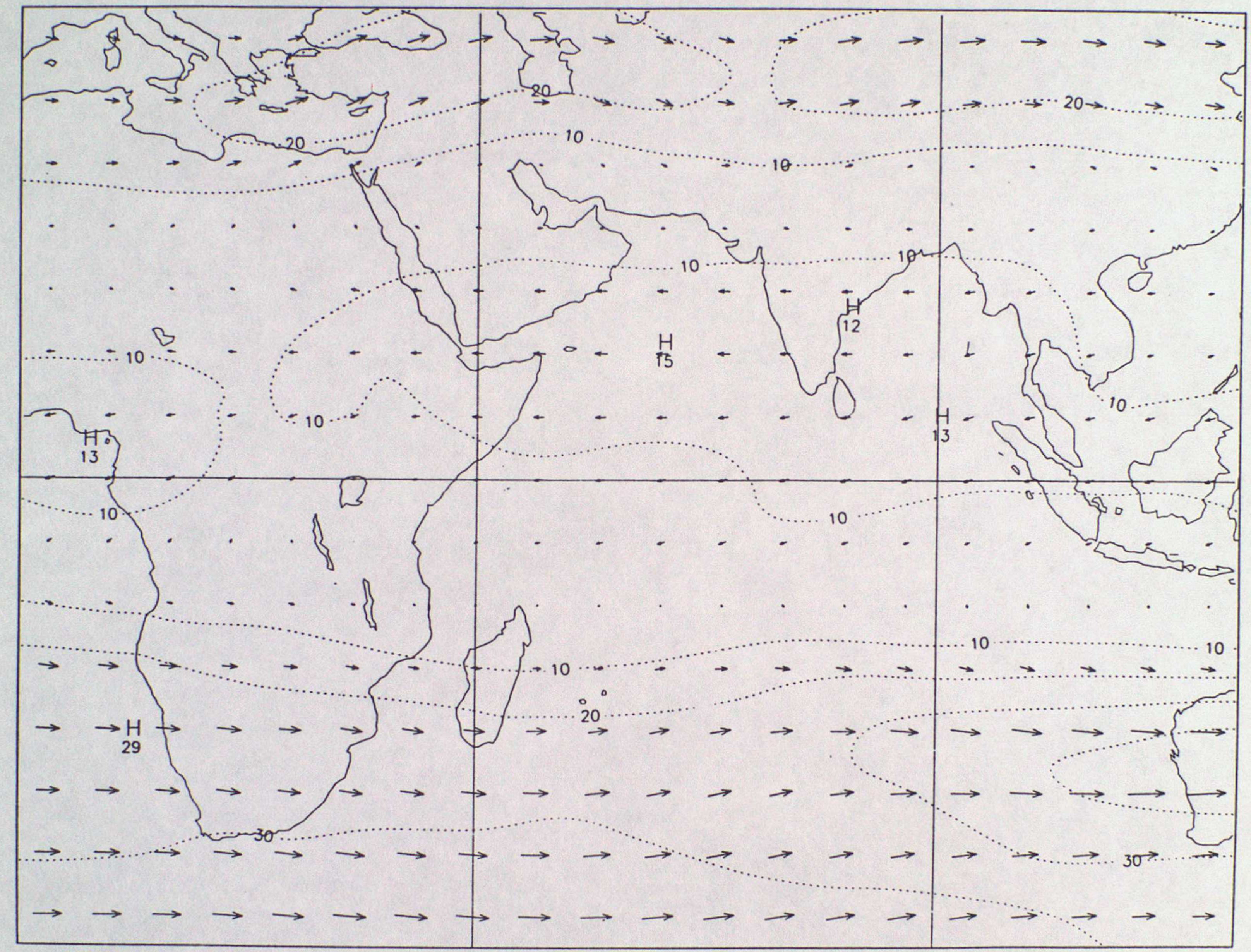
→ REPRESENTS 10 M/S

OPERATIONAL ARCHIVE MEANS.     JUN/JUL/AUG1989
WIND ARROWS AND ISOTACHS  BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM  0Z ON 1/6/1989 DAY 152 TO 12Z ON 31/8/1989 DAY 243
850 MBS.                    BETWEEN LONGS. 120 W - 0 W



H 3
5
5
5
5
H 9
H0 100
5
5
10
H 11
10
5
H 7
5
H 85
5
H 6
H 8
5
10
5
→ REPRESENTS 10 M/S

OPERATIONAL ARCHIVE MEANS.     JUN/JUL/AUG1989
WIND ARROWS AND ISOTACHS  BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM  0Z ON 1/6/1989 DAY 152 TO 12Z ON 31/8/1989 DAY 243
250 MBS.                BETWEEN LONGS. 0 E - 120 E


20
20
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10
20
10
10
10
H
12
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15
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10
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H
13
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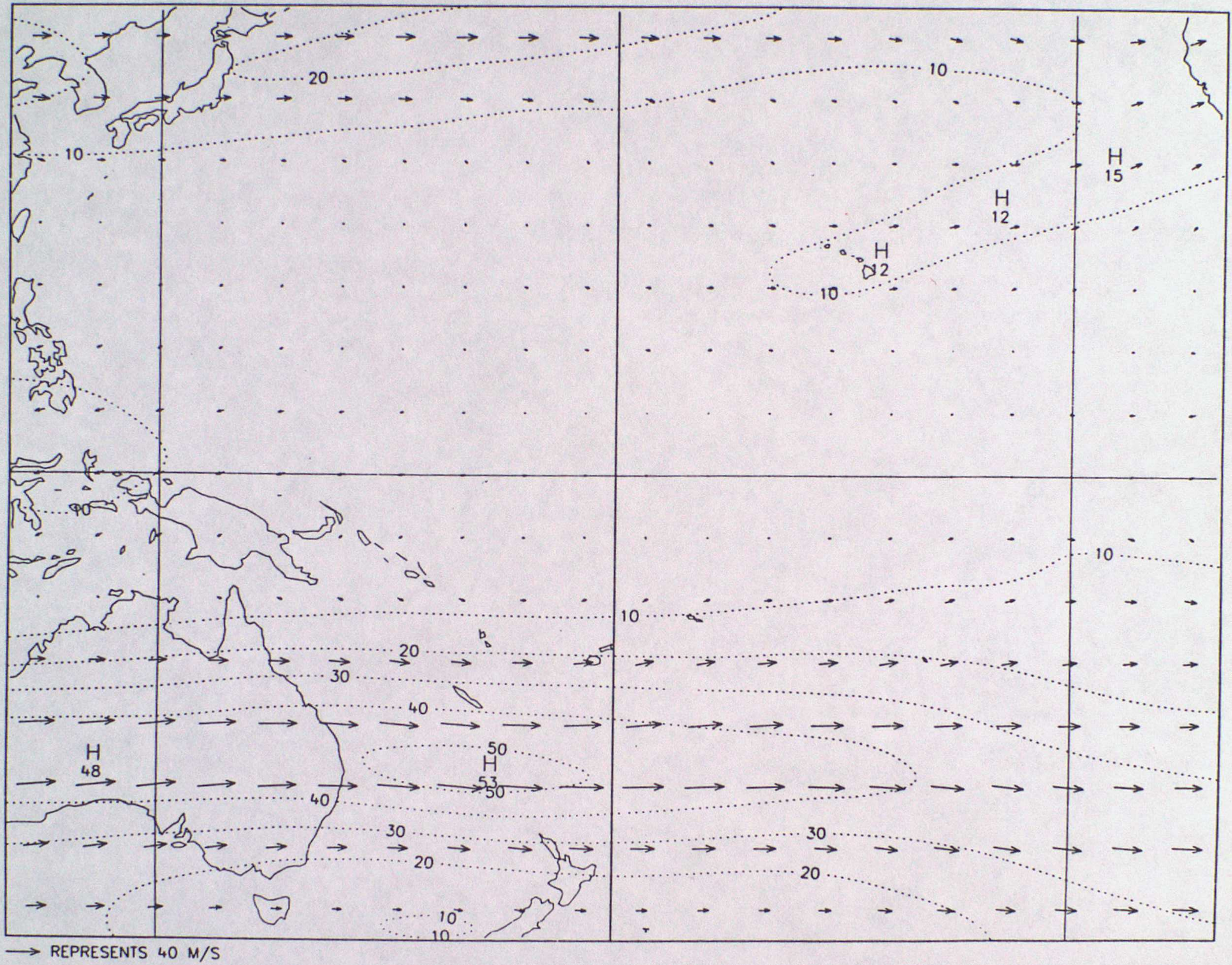
10
10
10
10
20
H
29
30
30

→ REPRESENTS 40 M/S

OPERATIONAL ARCHIVE MEANS. JUN/JUL/AUG1989
WIND ARROWS AND ISOTACHS BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM 0Z ON 1/6/1989 DAY 152 TO 12Z ON 31/8/1989 DAY 243
250 MBS. BETWEEN LONGS. 120 E - 120 W


20
10
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H
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12
H
12
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10
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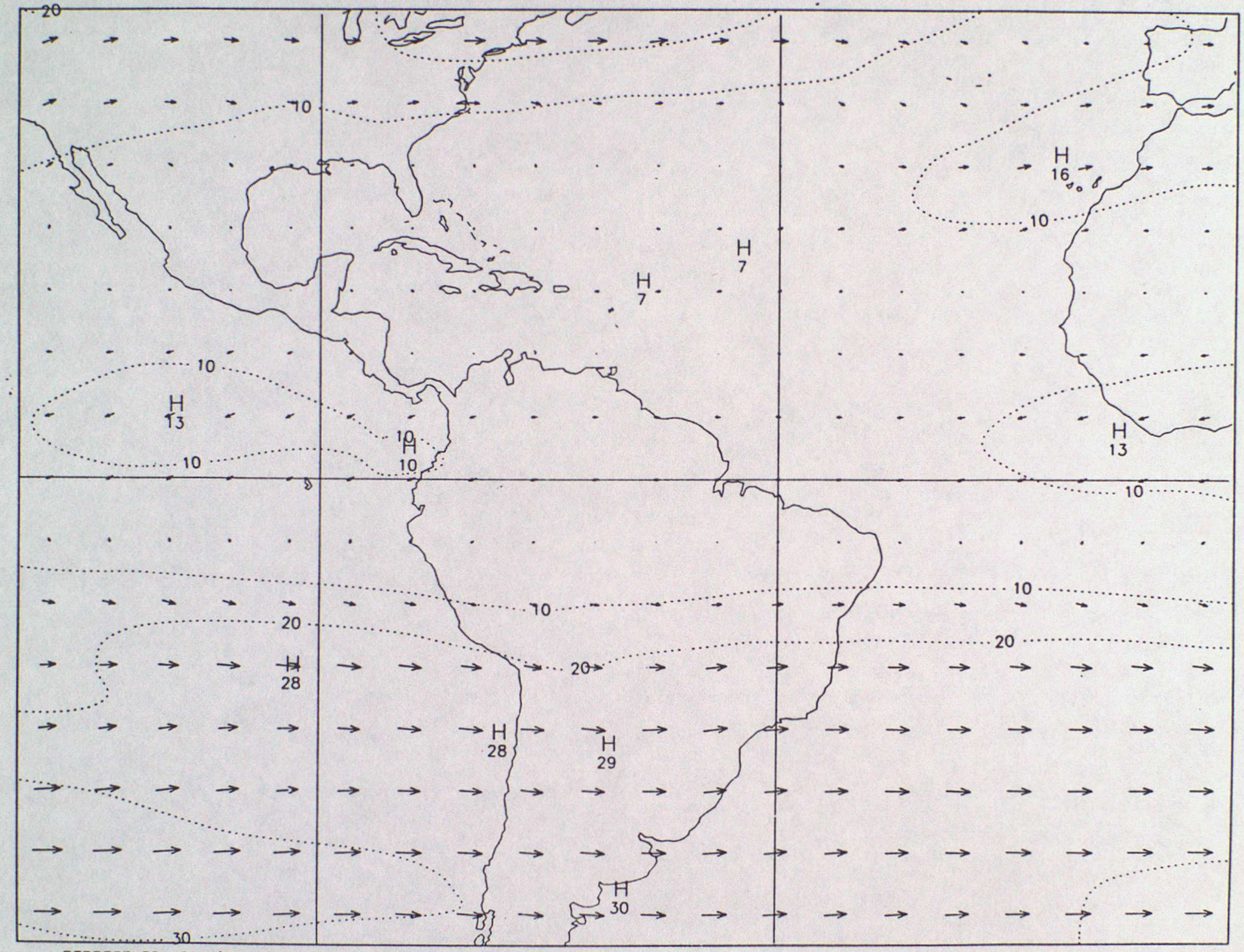
20
30
40
H
48
50
H
53
50
40
30
20
30
20
10
10
→ REPRESENTS 40 M/S

OPERATIONAL ARCHIVE MEANS.     JUN/JUL/AUG1989
WIND ARROWS AND ISOTACHS  BETWEEN LATS. 45 N - 45 S.
AVERAGE FROM  0Z ON 1/6/1989 DAY 152 TO 12Z ON 31/8/1989 DAY 243
250 MBS.                    BETWEEN LONGS. 120 W - 0 W


20
10
H
16
10
H
7
H
7
10
H
13
10
H
10
10
H
13
10
10
10
20
20
20
H
28
H
28
H
29
H
30
30

→ REPRESENTS 40 M/S